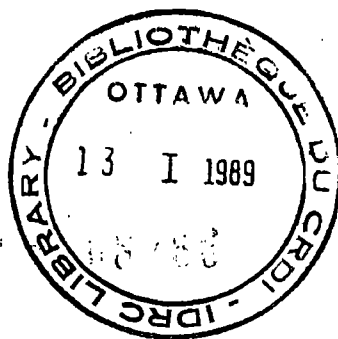


**UNDERSTANDING TECHNOLOGY TRANSFER,
COMMUNITY AND GENDER IN AFRICA**

Patricia Stamp

Toronto

1987



ARCHIV
396: 001.92 (6)
S 8

~~FOR USE BY IDRC STAFF ONLY
A L'USAGE EXCLUSIF DU PERSONNEL
DU CIDI~~

**PREPARED FOR THE INTERNATIONAL DEVELOPMENT RESEARCH CENTRE,
OTTAWA, ONTARIO AND THE ROCKEFELLER FOUNDATION, NEW YORK, N.Y.**

COPYRIGHT

1987



THIS REPORT IS THE PROPERTY OF THE
INTERNATIONAL DEVELOPMENT RESEARCH CENTRE
AND IS TO BE RETURNED TO THE CENTRE
ON REQUEST

TABLE OF CONTENTS

Preface	v
Glossary of Acronyms	vi
Introduction	1
 PART I	
CONCEPTUAL FRAMEWORKS.....	7
 CHAPTER 1	
THE FIELDS OF KNOWLEDGE.....	8
A. Women's Studies in Africa: A History	11
B. Feminist Theories: A Classification	14
C. Feminist Political Economy and the Study of African Women	17
 CHAPTER 2	
CONCEPTUALIZING TECHNOLOGY, GENDER AND DEVELOPMENT.....	20
A. Technology and Development: The Continuing Invisibility of Gender	21
B. Gender, Health and Nutrition: Conceptual Approaches	25
C. Conjuring Women and Gender Issues in The Research/Action Loci	33
 PART II	
TECHNOLOGY TRANSFER: GENDER AND POWER	
IN THE VILLAGE AND FAMILY.....	40
 CHAPTER 3	
TECHNOLOGY, GENDER AND DEVELOPMENT IN AFRICA:	
THE FINDINGS	41
A. African Women and Technology: Dependency and Disadvantage	41

B. The Politics of Technology and Gender:	
Five Issues	46
1. The technological 'fix'	46
2. Sexist bias in policy	49
3. Appropriate technology	53
4. Income generation	57
5. Women as 'welfare' subjects	59
C. Technology Transfer and the Decline of Women's Power	60
The Mwea Rice Irrigation Scheme in Kenya	61
The Kano River Irrigation Project in Nigeria	64
D. Women as Decision-Makers in Technology Transfer:	
The Importance of Women's Grassroots Organizations	68

CHAPTER 4

FEMINIST POLITICAL ECONOMY: UNDERSTANDING THE TRANSFORMATION OF GENDER RELATIONS IN AFRICA	73
A. Gender Relations and Women's Self Help Groups in Mitero, Kenya	74
B. Cases in Feminist Political Economy	85
Land Reform and Luo Women's Rights	85
Women as Food Producers and Suppliers in Zambia	89

PART III

NEW APPROACHES	94
----------------------	----

CHAPTER 5

NEW ISSUES IN TECHNOLOGY, GENDER AND DEVELOPMENT	95
1. Towards a new synthesis in the study of gender, technology and development in Africa	97
2. Researching the community: women's associations and sex-gender systems	100
3. Conceptual problems	104
a) The public/private dichotomy	104
b) The nature of the 'family' and the 'domestic realm'	107
c) The economic as the socially determining level of society	109
d) The nature of 'the traditional'	110
e) Liberating subjugated knowledges	113

4. The neglected focal points for social transformation	117
a) Women's rights	117
b) The role of the media	119
c) The social dimensions of health care	121
d) Indigenous technology and invention	122
e) The conscientization of men	123
5. The boundary problem	124
6. Who does the research?	124

CHAPTER 6

FRAMING FUTURE RESEARCH	126
A. Classifying Sex-Gender Systems	126
Research Checklist	127
B. Overcoming the Boundary Problem	130
Template of Interrelationships	132
C. Organizing for the Dissemination of Technology	133
Model for the Horizontal Dissemination of Technology	134
D. Inventory of Successful Initiatives	136
1. The nature of the inventory	136
2. Research tasks for creating the inventory	141
E. Transforming the Aid Expert/Aid Recipient Relationship: An Exercise in Applying Theory	142
1. Thinking about theory	142
2. Applying the theoretical insights: six hypotheses about the relationship	147
3. Research tasks for the transformation of the aid expert/aid recipient relationship	151

REFERENCES	157
------------------	-----

AUTHOR INDEX	177
--------------------	-----

SUBJECT INDEX	183
---------------------	-----

PREFACE

This monograph is part of a larger joint project of the International Development Research Centre and the Rockefeller Foundation, involving research on gender, technology and development in the Third World, conducted in 1986 and 1987. The brief of the study was to focus on the ways in which different types of community organizations in Africa, both those that are indigenous and those externally imposed, influence the introduction and sustained use of agricultural, health and nutrition related technologies. The brief was to be carried out within the framework of four tasks: first, the presentation and critique of existing conceptual approaches to the subject; second, a review and discussion of major research findings highlighting areas of consensus and disagreement; third, the identification of issues and interrelations that have not been addressed in previous research; and fourth, discussion of promising ways to frame the topic for future research.

I wish to thank Vuyiswa Keyi, Research Assistant, for her contribution to this study. Her persistence in tracking down sources, and her insights as an African feminist, anthropologist and former nurse, were invaluable in shaping questions to be asked of the literature. Margo Hawley, Reference Specialist in the IDRC Library, entered the search with enthusiasm, imagination and efficiency: her help in shaping data base questions, and the constant stream of printouts from Ottawa to Toronto, ensured access to a wide variety of material. Once again, I owe to Stephen Katz my thanks both for perceptive suggestions and tactical assistance, and for his support of the intensive electronic cottage industry that writing of this kind has become.

GLOSSARY OF ACRONYMS

AAWORD	Association of African Women for Research and Development
ATRCW	African Training and Research Centre for Women (ECA)
CCIC	Canadian Council for International Cooperation
CIDA	Canadian International Development Agency
DANIDA	Danish International Development Agency
DAWN	Group for Development Alternatives with Women for a New Era (Asia and Africa)
ECA	Economic Commission for Africa (UN)
FAO	Food and Agriculture Organization
IDRC	International Development Research Centre
IDWSSD	International Drinking Water Supply and Sanitation Decade
ILO	International Labour Organization
IMF	International Monetary Fund
INSTRAW	International Research and Training Institute for the Advancement of Women
ISIS	ISIS Womens International Information and Communication Service
KRP	Kano River Project
KAP	Knowledge, Attitude, Practice (a survey methodology)
NGO	Non-governmental organization
OAU	Organization of African Unity
RCCDC	Research Centre for Cooperation with Developing Countries (Yugoslavia)
RFR/DRF	<u>Resources for Feminist Research/documentation sur la recherche feministe</u>
ROAPE	<u>Review of African Political Economy</u>
SIDA	Swedish International Development Agency
UN	United Nations
UNDP	United Nations Development Programme
UNECA	Economic Commission for Africa (UN)
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Childrens Fund
UNITAR	United Nations Institute for Training and Research
USAID	United States Agency for International Development
WAG	Women's Action Group (Zimbabwe)
WB	World Bank
WHO	World Health Organization
WID	Women in Development (initiatives, programmes, departments)
WIN	Women in Nigeria (women's organization)
WRDP	Women's Research and Documentation Project (Tanzania)
ZARD	Zambia Association for Research and Development

INTRODUCTION

Technology, according to Chinua Achebe, is an attitude of mind, not an assemblage of artefacts.¹ The experience of Third World societies with western technology over the past twenty five years has proven the wisdom of this statement. The massive transfer of technology -- both as artefact and as information -- has often been accompanied by misuse, misallocation or misunderstanding in the recipient countries. In particular, it has generated negative consequences for women, children and communities -- nowhere more so than in Africa.

Whose fault is this? The issue has been debated in an endless series of publications and conferences written or sponsored by donor agencies, academics and non-governmental organizations. To answer the question, and to get beyond blaming either the givers or receivers of the technology, we must take Achebe's idea a step further, and understand technology as social construct and social practice -- the product of a particular society's history. At the same time, we must recognize that new technology, arising from the political and economic needs of a particular era of development in a particular society, generates new forces of production, and new social relations. In other words, technological artefacts are the raw material created out of historical experience, which in turn recreate society.

In the western world, because technological advance and economic development have gone hand in hand, we do not see the historical and cultural specificity of our artefacts, instead viewing them as neutral objects, the inevitable products of progress "stacked conveniently for ease of lifting" (to quote Achebe again). We may now be starting to question the effects of certain technologies -- from computers to pesticides -- on our society and environment; on the whole, however, we still see technology as a physical rather than social presence. Those voices that do pose technology as social construct, such as environmental groups, are marginalized by dominant perceptions of technology.

It is for this reason that we have found it so difficult to understand the problems of technology transfer in the Third World. Third World leaders and experts themselves, recruited to our vision of technology as a socially neutral force, have also been stymied. Critics within Third World countries rarely find a politically legitimized means of challenging this vision. Any enquiry into the problems of technology transfer must thus pay careful attention to the conceptual frameworks that shape understanding of the relations between the developed west and the underdeveloped world. In particular, we must critically examine the way in which these frameworks define the problems of the Third World.

¹ Chinua Achebe, The Trouble With Nigeria. London: Heinemann, 1983, p.19.

Fortunately for development in the Third World, and for our understanding, gender has become an issue. The feminist imperative² has forced the search for answers to two key questions regarding technology transfer: first we must ask, 'appropriate' for what and whom? Is the outcome envisaged really development? Unless women and -- by intimate but not previously self-evident implication -- children are unequivocally served, society itself has not been served. The great achievement of feminism in the past fifteen years has been an emerging moral and scientific commitment to the truth that women are half of humanity, and that gender relations are as fundamental a shaping force in society as economic relations or political structure. Indeed, there is no political economy that is gender-neutral, as those who are willing to look discover. In development discourse, women are no longer invisible -- even if they do not yet get equal time.

Second, the push to evaluate technology transfer in the light of gender questions has necessitated the question: has social reality adequately been taken into account? It is no longer possible to view technology as artefact, or to avoid the difficult task of examining our underlying assumptions about Third World societies. The answer to the question as to whether gender has been properly taken into account becomes a test of the scientific accuracy of the study, or the degree to which it is value-laden.

It is with these questions that this monograph is preoccupied. Implicit in the mandate of the study is an understanding that technological change is a social process. We cannot investigate this process, however, without considering the dialectical relationship discussed above. Each element of technological innovation that has been introduced, whether transferred from the western technology complex or designed for the perceived needs of Third World communities - carries with it assumptions regarding the proper social organization for its use. Community structures, from family to women's organizations, have thus not been inert recipients of the technological freight: rather, they have either actively reconfigured themselves to the requirements of the technology, or they have rejected or redirected its intended use. Only where the technology transfer has been designed on the basis of real needs, as perceived by the recipients, and on fully understood social relations, has it clearly achieved its purpose.

In Africa, given that agriculture, health and nutrition are largely the province of women, this means that successful technology transfers in these fields are those that empower women, strengthening rather than weakening their community involvement, and their decision-making authority in village and family. All too often the reverse has been true, with profoundly negative consequences: not only has the new technology not had its desired effect, but African women have found themselves with increased workloads, a more subordinate position within the family, attenuated communal life with other women, and lost rights to resources. These circumstances compromise women's abilities to carry out their traditional production, health and nutrition responsibilities, let alone new responsibilities linked to development goals.

² Feminism is used here in its broadest sense: concern with justice and equality for women.

Yet previous studies have tended to focus on technology adoption, to the exclusion of questions of "technological maintenance and operational control" (Bryceson, 1985: 8). From such a perspective, it has been possible for many studies to construe the village and family as 'obstacles' to technological change rather than as active decision-makers regarding its acceptance, modification or rejection. Further, this approach has rendered the effects of technology on social relations invisible.

This is why planning efforts, aided by development agencies, have so often failed. Pari Mohammadi of the Economic and Social Commission for Asia and the Pacific asserts that "in every respect, attempts to sensitise planners and reorient national planning processes to increase women's participation have not yielded significant results; whereas, training women for participation in local-level decision making and planning has had surprisingly quick and strong impact" (1984: 80). Nowhere is such participation more important than in technology transfer issues: women, who are the primary producers and caregivers in African communities, are the key users of the technology that has the most direct impact on the economic wellbeing, health and nutrition of African families.

This study will thus pay particular attention to the dialectical nature of technology transfer, a process which can either disempower or empower village women to engage in genuine development. It will go beyond preoccupation with the moment of transfer to consider the complex ways in which new technology and society interact. Further, it will take the stand that the problems new technologies are designed to solve are themselves frequently a social construct. Africa is not naturally hungry, drought-stricken, short of fuel and diseased. As Doyal says with regard to the latter, "contrary to common belief, [the] diseases of underdevelopment are not necessarily bound up with tropical conditions in the geographic or climatic sense. Cholera, plague, leprosy, smallpox, typhoid, TB and many intestinal parasites have all thrived in western Europe in the past." Contemporary health problems "must be seen not as a 'natural' and unavoidable part of life in the third world"; rather, they should be viewed as a consequence of specific historical developments (Doyal, 1979: 100-101). By removing the technology-related problems of agriculture, health and nutrition from the realm of the 'natural' to the realm of historical and sociological analysis, we may engender both a more scientific and a more optimistic approach to their solution.

The literature on women and development in Africa has made it abundantly clear that an understanding of national and international political economy is necessary for explaining the processes at work to disadvantage women and undermine development. The link between international markets, commodity production and male control of cash crops, for example, with concomitant negative effects upon women's economic and political participation, has been documented in numerous studies. The two chapters on conceptual frameworks in Part I chart the development of knowledge within the different loci of research and action regarding this broad context, and point to the different constructions of the problem. An important dimension of this overview, treated in chapter 1, is a review of the development of feminist enquiry as a new field challenging conventional social science assumptions, and a consideration of the relation between this new field of study and African

Studies. In chapter 2, the continuing invisibility of gender in a number of the research/action loci is explored; second, the special problems and opportunities of health and nutrition research are surveyed; finally, the sources of challenge to conservative views regarding development, particularly challenges from African women (often supported by progressive elements in multilateral and bilateral agencies), are identified.

Part II, on research findings, focuses primarily on the local community, where the subtle interaction of technology and gender relations can be explored. Bryceson (1985; 8) comments that in most of the existing literature on women and technology, "male domination in its cultural and institutional sense, is treated as an historical given fact. Having identified the extent and incidence of the edge that men have over women in the acquisition and control of technology, the analyses rarely offer an in-depth dissection of its nature." The local community is the ground upon which this neglected task must be carried out. A major reason for the problem Bryceson identifies is the lack of historical and cultural specificity in much of the women and technology literature. Yet social scientists -- particularly anthropologists and historians -- have done much in recent years to elucidate the subject of gender relations in the context of specific African societies, at different points in time. Chapter 3 explores the issues regarding technology, gender and development around which a consensus has emerged in the women-in-development (WID) and women-and-technology literature. The first part of chapter 4 sets forth an analysis of gender relations in Africa by way of a case study on women's self help groups in Kenya. In the course of this analysis, an argument is made for a particular approach to the subject: feminist political economy. Synopses of two studies by African feminist scholars in the second part of chapter 4 substantiate the case for this approach.

A major task facing this study is to show the way in which the combined insights of the WID research and feminist political economy might become the basis of future research on the technology transfer process. A boundary problem exists, not only between areas of scholarship which do not adequately interact, but between policy networks, which frequently have been unable to take mutual advantage of each other's insights. According to Patricia Kutzner of the World Hunger Education Service (personal communication, October 1986), the inability of the food policy network to draw resources from the women's studies network is a case in point. Part III therefore addresses new issues and interrelationships which might direct future enquiry, and overcome the limitation of past approaches. Chapter 5 sets forth the issues and relationships, giving examples to demonstrate the efficacy of the approach being suggested, while chapter 6 provides five tasks, each using a different method, as possible concrete ways to frame the topic for future research.

The study has several necessary parameters. One is geographic: Africa north of the Sahara is excluded from the review. While there is no sharp boundary between black and Arab Africa, and many arguments can be made for historical and cultural continuity between the two, it is an accepted convention in African Studies to treat 'Black Africa' as a distinctive geographical and cultural region. For all its diversity, it shares common historical themes and environmental opportunities and constraints. African

societies have developed common responses to these opportunities and constraints, as their ancestral people, divided into four major linguistic groups, populated the continent during several thousand years of successful migration and settlement. Later, in the mercantile and colonial eras, they shared the experience of serious human losses, and blows to their economic and political integrity, at the hands of Europeans.

Central to the nature of African society prior to colonialism was a prominent role for women in economic production, and a concomitant socioeconomic and ideological position that, while subordinate to that of men, appears to have been considerably more favourable than that of women in other regions of the world. Since then, women have seen a loss of their traditional autonomy and authority. One of the central tasks of development in Africa today is to discover ways in which women may regain previous decision-making powers and control over resources.

A second parameter is linguistic: English-speaking Africa is the basis for this study, both to limit the material reviewed, and because of less proficiency in French than I would care to admit. I would argue, however, that while different colonial and postcolonial strategies have led to some different directions for Francophone and Anglophone Africa, and while the French intellectual tradition has led to some different theories and emphases in research, the language of colonialism did and does not make for substantial differences in the experiences recorded here.

Examples are taken from a number of countries, to illustrate both the problems and the fruitful lines of enquiry to be found in the literature. Case studies are derived from two countries in particular: Kenya and Nigeria. Both are countries for which there exists a large body of scholarship, by foreigners and indigenous researchers, including work on gender relations and women's position. Both exemplify the problems and opportunities for women inherent in contemporary African gender relations; both have examples of pastoral and agricultural societies facing the dilemmas of development. A key difference lies in the much greater degree of urbanization in Nigeria, and the extensive involvement of women in trade in that country. A further difference is the substantial presence of Islam in Nigeria, while Kenya has a much smaller proportion of Muslims, religious affiliation being largely Christian. With regard to research, an abundance of medical studies have been conducted in Nigeria, while there is a relative paucity of them in Kenya. On the other hand, numerous sociological and anthropological studies, including some excellent theoretical work, have been conducted in Kenya, while Nigeria's record in the social sciences is less exciting.

A third parameter is a more haphazard one: the quantity of literature about technology and development on the one hand and about women and development on the other hand is so huge that no literature review can encompass, let alone comment meaningfully upon, the entire corpus. This study does, however, present an account of the writing that to the best of my knowledge accurately represents the different schools of thought, approaches and contents comprising the literature. The reader will notice that there is no categorization of the literature by African and non-African authorship. As the review reveals, Africans contribute to each of the conceptual frameworks;

ethnicity and race do not form any basis for classification. There is no 'African approach' -- although there are African concerns about western domination of African thought.

It is not the intention of this study to denigrate all technology transfer. Indeed, there are many cases of technology being adopted successfully, and to their great benefit, by women and by communities -- from safety pins to sewing machines to wells, mills and cattle dips. The mandate of the IDRC/Rockefeller Foundation project, however, entailed a problem to be addressed, rather than a celebration of technological wonders for the Third World. Consequently, a major portion of the effort in this monograph is directed at how and why technology transfer fails, and what might be done to make it succeed.

PART I
CONCEPTUAL FRAMEWORKS

CHAPTER 1

THE FIELDS OF KNOWLEDGE

The problem regarding technology and gender in Africa is not a lack of knowledge, but the fact that knowledge is fragmented. Understanding is structured by different conceptual frameworks that derive from the different concerns and orientations of investigators in different professions, organizations and fields. Further, in much of the literature on Africa, technology itself is treated -- if at all -- incidentally or descriptively, as artefact rather than as active social force. It is only by surveying the general conceptual frameworks that we can uncover the assumptions underlying different explanations about technology, gender and development. What emerges in the following review is the fact that in many explanations, a relationship between gender and technology is not conceptualized at all.

Another dimension of the fragmentation of knowledge is the existence of different loci of research and action regarding Third World development in general, and technology transfer in particular. Knowledge generated within each locus is not always easily shared or even sought by other loci, although researchers and policy makers move between them as individuals, bringing insights and information from one to the other. The loci may be classified as follows:

- 1) Academic research
 - a) Western
 - b) African and Third World
- 2) Multilateral agencies
 - a) United Nations agencies such as: International Labour Organization (ILO); Food and Agriculture Organization (FAO); World Health Organization (WHO); International Research and Training Institute for the Advancement of Women (INSTRAW); United Nations Economic Commission for Africa (UNECA); United Nations Institute for Training and Research (UNITAR); the United Nations Children's Fund (UNICEF); the United Nations Development Programme (UNDP) and the United Nations Educational, Scientific and Cultural Organization (UNESCO).
 - b) The financial agencies such as: the World Bank; International Monetary Fund (IMF).
 - c) African regional organizations such as: Organization of African Unity (OAU); Economic Commission for Africa (ECA); African Research and Training Centre for Women (ATRCW).

- 3) Bilateral research and development agencies such as: Canadian International Development Agency (CIDA); International Development Research Centre (IDRC); United States Agency for International Development (USAID); Swedish International Development Agency (SIDA); Danish International Development Agency (DANIDA); Research Centre for Cooperation With Developing Countries (Yugoslavia -- RCCDC).
- 4) Non-governmental organizations
 - a) Western organizations, such as foundations; church organizations; special purpose agencies such as the Equity Policy Center; International Planned Parenthood Federation; Centre for Development and Population Activities; umbrella organizations such as the Canadian Council for International Cooperation; World Hunger Education Service; research institutions such as ISIS womens international information and communication service.
 - b) Third world and African organizations, such as Association of African Women for Research and Development (AAWORD); Development Alternatives with Women for a New Era (DAWN group); country organizations such as Women in Nigeria (WIN), Maendelao ya Wanawake (Kenya), Women's Action Group, Zimbabwe (WAG); Women's Research and Documentation Project, Tanzania (WRDP); Babikar Badri Association for Women Studies, Sudan.
- 5) African governmental institutions

Ministries responsible for rural development, women's affairs etc., such as Zimbabwe's Ministry of Community Development and Women's Affairs; and government agencies, such as the Kenya Women's Bureau.

No locus is characterized by a single conceptual framework. Each participates in a particular set of visions regarding the nature of technology transfer problems, however, that must be seen in the context of broad developments in social science knowledge over the past twenty years.

The most familiar classification of approaches is the spectrum of assumptions regarding the causes of underdevelopment (the condition that creates technology-transfer as a problem for Africa). At one end are many African and western governments, and institutions such as the IMF and World Bank, which believe that Africa's problem is lack of participation in modernity in all its aspects; integration into the world market economy is the route to development, and any policies or societal structures that prevent such wholesale integration are seen as obstacles to progress. At the other end of the spectrum are those who believe that such integration has created a dangerous dependency which is itself the source of the problem, in that it serves the international capitalist order, and not the developing Third World society.¹ This view is espoused by some African governments, political

¹ Dependency and underdevelopment theories have a complex history, stretching from the pioneering work of André Gunder Frank (1967) and Paul Baran (1968), through the African contextual applications of

economists of the left, and an increasing number of Third World feminists. In the first case, the problem of technology is constructed as the problem of overcoming obstacles to its adoption; in the second case, the problem of technology is constructed as the problem of limiting its negative impact, and rendering it responsive to social needs.

Less familiar is the spectrum of assumptions regarding the nature of the gender problem. Feminism, which has provided much of the energy for the critique of development planning in the last fifteen years, is itself a problematic issue. The media image of the western movement has often been negative, portraying women as grasping individualists, concerned only for their own wellbeing and not for their family, menfolk or society. African women themselves have often distanced themselves from western feminist goals as they perceive them.

Setting aside the popular prejudices against and stereotypes of feminism, it is possible to categorize feminist thinking in such a way as to determine what is and is not relevant to an understanding of African gender relations and the problems of technology transfer. Resistance to feminist theory and research by planners, policy makers and many Third World women stems from the confusion of radical feminism, which is ideologically based and polemical in its approach, with other forms of feminism, which have a more thorough grounding in social science analysis. It is radical feminism, with its assertion that women's oppression is biologically based and supercedes all other forms of oppression, that has been selected by the media and popular prejudice to stand for all feminism. The argument that all women have been oppressed by all men throughout time and across all cultures is pessimistic, politically unpalatable, and scientifically unsound; it has created an easy target for a sexist backlash against more reasoned feminist positions.

The latter have sought to describe and theorize the precise ways in which women were and are oppressed in most human societies, in order to generate models for change based on more egalitarian experiences of the past, and on the democratic principles of the present. The following review surveys the emergence since the 1960s of Women's Studies as a field of enquiry, on the one hand charting the diverse experiences that led to different theoretical frameworks, and on the other hand charting the emergence of feminist concerns within the field of African Studies -- itself a developing area of social science enquiry. The review reveals that radical thinking about women is not necessarily 'left' -- i.e. concerned with issues of social justice and

Samir Amin (1972), Colin Leys (1975) and Walter Rodney (1972), to the nutrition activism of Susan George (1977; 1979) and Frances Moore Lappé (1978; 1980). In the past ten years there have been variations on dependency theory such as the dependent development of Peter Evans (1979), while other scholars, such as John Taylor (1979), have challenged the theory for its economism, arguing instead for a 'modes of production' approach. While this huge and important area of scholarly debate is beyond the scope of the present study, some of the arguments are dealt with below, in section A.

redistribution of resources, while radical political economy is not necessarily feminist -- i.e. concerned with issues of gender equality and women's rights. Researchers, planners and policy makers, in seeking to develop a framework of analysis with which to structure empirical evidence regarding technology and gender, may avoid the dogmas of both traditions, and find a fruitful middle ground on the terrain of what I call feminist political economy.

A. Women's Studies and Africa: a History

In North America, both Women's Studies and African Studies have a common origin in the great popular movement of the 1960s and early 1970s. The ideological impetus provided by the Civil Rights and anti-war movements in the U.S. fueled the enquiry both into women's oppression and into neocolonialism in the Third World. African Studies itself was generated by a desire for a non-racist understanding of African civilization. The new opportunities for women scholars at this time, combined with the powerful ideology of the women's movement, blew the doors of academia open, and led to the questioning of the very premises of Western social science, not to mention its methodologies and conclusions.

The first spate of feminist writing in the early 1970s was popular, enthusiastic, and from the gut; some of it was wildly radical. On the one hand, women took the skills and knowledge gained during their liberal education in the 1960s and used them to critique that education and its sacred texts (Slocum, 1975 [1971]; Millett, 1970). On the other hand, they took the radical political activism of the 1960s and turned it in a new direction. The sexism of anti-war activism in particular ("women make coffee, not revolutions"), triggered the women's movement and its supporting literature -- from Ms. Magazine to Sisterhood is Powerful (Morgan, 1970) and the SCUM Manifesto (Solanas, 1970). It is important to talk about this non-academic movement because out of it flowed the energy and different directions for the different feminist schools of thought, that matured in the late 1970s and in the 1980s.

The second stream of feminist writing emerged immediately out of the first: this was the academic movement towards Women's Studies. Already-established scholars, and graduate students trained traditionally in the different disciplines, turned to feminist enquiry. Those of us who mounted the first Women's Studies courses in the early 1970s had to comb the literature for useful texts. A course on African women had to rely on the rare non-sexist anthropological studies such as Cohen (1969), a collection of French articles hastily put into paperback (Paulme, 1971[1960]), and the now-classic survey by Ester Boserup (1970). The shortage of materials forced us to do our own research (Van Allen, 1972; Stamp, 1975-1976) and to anthologize our own texts and special journal issues (Canadian Journal of African Studies, 1972; African Studies Review, 1975; Hafkin and Bay, 1976). Some of this work began to critique mainstream social science (see for example Slocum, 1975), but most of the work of the early 1970s was within the liberal tradition of 'adding women on' rather than presenting coherent challenges to the social science corpus. It was vital work, however, providing as it did the critical mass of evidence necessary for new theories of gender relations.

As for the relations between the activist and academic feminists: the two groups were having different life experiences on the whole, and thus formed two distinct feminist political cultures. Third World scholars in particular were not centrally involved in the issues and struggles of the activists. It was only when North American activist attention turned outward to the Third World later in the 1970s (the Women's Decade having much to do with this change), that 'established' women's studies scholars were forced to face the other feminisms (see the criticisms in Davies, 1983; Morgan, 1984 for example).

In African Studies, the 1960s and early 1970s were a time of liberal scholarship as well. The 'sociology of development', or 'modernization theory', following the tenets of Rostow's Stages of Economic Growth (1971), conceptualized society as on a linear path between 'traditional' and 'modern'. This conception saw indigenous economic, social and ideological practices as 'obstacles' to progress, which was constructed as a cumulative process of expansion. Micro-level studies focussed in a non-critical way on the problems of family and of urban life, often treating them in isolation from larger political and economic processes (for example Hanna and Hanna, 1971).

This scholarship had little to say about women, except that they occupied the sphere of the 'traditional': it was only in this context that they were considered legitimate subjects of analysis. But out of this liberal tradition arose a radical critique of 'developmentalism'. Drawing inspiration from the Latin American school of underdevelopment theory (for example Frank, 1967), Africanists adopted the premise that African problems should not be seen out of the historical context of colonialism and the international capitalist economic order (see Amin, 1972; Rodney, 1972).

The other source of inspiration for the new 'political economy' school was the great breakthrough in Marxism led by the French theorists and others in the structural Marxist school (two texts in this school are Althusser and Balibar, 1970; Poulantzas, 1973. Particularly useful for Third World analysis is Laclau, 1977). The 'vulgar Marxism' that had dominated the 1930s to the 1960s, with its reductionist focus on the class struggle of advanced capitalism, had proved relatively sterile in the context of Africa's underdeveloped capitalism. According to the new thinking, capitalism in Africa is characterised by a nascent class structure, a lack of both a strong bourgeoisie and a strong working class, and by the remnants of precapitalist society. It is further complicated by ethnicity.

The Review of African Political Economy (ROAPE), founded in England in 1974, was the forum for young scholars and graduate students, and for older scholars who turned to a socialist analysis. The significant achievement of the school of thought of which this journal was a part was the theorizing of class relations in underdeveloped capitalism, the form of capitalism characteristic of the neocolonial periphery. The way in which pre-capitalist elements are retained in a dominated and distorted form in the service of capital accumulation was an important part of this analysis. The two opposing classes are not bourgeoisie and working class, but dependent bourgeoisie and peasantry. For the first time, there was a rigorous theory to explain

'African development problems', based on historical analysis of indigenous political and economic processes, as well as on an understanding of Africa's relations with the West through the mercantile, colonial and post-colonial eras (see for example Taylor, 1979; Mamdani, 1976; Leys, 1975; Katz, 1980). Intrinsic to this work was an attempt to understand the political economy of precapitalist societies in the Third World. Out of a vigorous debate regarding the applicability of the concept of mode of production has come a consensus that African societies were characterized by two modes of production: a tributary mode of production underpinning the trade-based kingdoms of Africa; and a communal mode of production characteristic of Africa's numerous small-scale, kin-based societies (Amin, 1974; Terray, 1972; Coquery-Vidrovitch, 1975; Crumney and Stewart, 1981).²

However, women were largely invisible in this political economy school of thought (see, for example, as recent a text as Lawrence, 1986: the proceedings of a 1984 ROAPE conference on the food crisis in Africa). With a few exceptions late in the 1970s (Conti, 1979; Sacks, 1979; Bryceson, 1980), work on women was left to the liberal scholars, or relegated to anthropology or sociology readers on women and to 'women's panels' at conferences, where it was largely ignored. The potentials of the new political economy for feminist analysis were vast, but it took until the late 1970s and early 1980s for the challenge to be taken up. And it was the liberal feminist scholars who first recognized the value of a synthesis of political economy critique and feminism. The earliest manifestation was the critique of development theory taken up by these scholars, who had been steadily conducting field research throughout the 1970s. Their empirical findings prompted them to challenge the assumptions underlying the traditional-modern model of progress and to situate women's oppression in wider structures of political economy. (see Elliott, 1977; Staudt, 1978; Lewis, 1980; Buvinic, Lycette and McGreevey, 1983; and Marshall, 1984). This was a time of burgeoning theoretical debates in the west regarding gender, production, and reproduction both in the biological and social sense. For example, the question 'what is patriarchy, and is it a valid unifying concept for understanding women's oppression?' was debated from all quarters (see for example Barrett, 1980).³

In the context of Africa, however, the different strands were not really pulled together, and the understanding of women's position, and of gender relations in general, remained fragmented. For example, while a number of scholars talked about "lost political institutions" and the decline of women's autonomy and power (Okeyo, 1980; Van Allen, 1976; Stamp, 1986), others took an

² There is a debate regarding appropriate terminology for precapitalist modes of production: for example Sacks (1979) terms the latter "kin corporate mode of production"; Meillassoux (1972) labels it "domestic mode of production". For its simplicity, I prefer, with Mamdani (1975), "communal mode of production".

³ The Cross-Cultural Study of Women by Margaret Duley and Mary Edwards (1986), a textbook designed for Third World gender courses, covers (albeit sketchily) the major debates of the 1970s and early 1980s, and provides selected readings and discussion questions.

opposing position, promulgating a more negative approach to the past and a more optimistic vision of the present and future, with the prospect of women being released from their traditional bondage once neocolonial and class oppression was overthrown (Urdang, 1979; Cutrufelli, 1983). Meanwhile, Third World scholars, including African women, were beginning to make their voice heard, particularly with regard to their dissatisfaction with Western 'intellectual colonialism'. Western feminists were seen as being as guilty as mainstream academics in this regard (Association of African Women for Research and Development [AAWORD] 1981; 1983).

B. Feminist Theories: a Classification

From the perspective of 1986, we need to investigate what, in this great outpouring of ideas, can be used to inform our understanding of African gender relations; we may ask, in turn, what African studies have contributed to the maturing of feminist theory. In this exercise, we should examine how to put the new political economy theory to work for feminist scholarship.

The most useful rallying point for this exercise is the work of an imaginative, synthesizing American feminist theorist, Alison Jaggar. Jaggar developed a classification of feminist theories (1977), which she has expounded in an undergraduate textbook with Paula Rothenberg (1984) and in a major theoretical work (1983). Although the boundaries between her "feminist frameworks" are to some degree arbitrary and unfixed (as she herself admits), the classification is grounded in a clear understanding of the historical context of each school of thought. First, she analyses the conservative, sexist traditions in scholarship, from Freudianism to the sociobiology of E.O. Wilson (1975), that feminists have challenged. Conservatism, which reaches back as far as Aristotle in social thought, has argued that a sexual division of labour and gender inequality are natural, whether God-given, gene-given or psychologically inherent. Jaggar then surveys four feminist frameworks: liberal feminism; radical feminism; traditional marxism; and socialist feminism. The following discussion builds on Jaggar's frameworks, pointing out their limitations and opportunities for the cross-cultural study of women.

1. Liberal feminism has its roots in the social contract theories of the sixteenth and seventeenth centuries, with their ideals of liberty and equality based on man's rationality, and the premise of a sharp demarcation between the public and private spheres. Taking Mary Wollstonecraft as its starting point (1975[1792]), liberal feminism looks to John Stuart Mill (Mill and Taylor, 1983[1851]) and Harriet Taylor (Mill and Taylor, 1983[1869]) for its inspiration. Arguing from the principles of the social contract and the rights of the individual, this feminism adds women on, basing its call for equal opportunity and equal rights upon the claim that 'women, too, are rational', and hence worthy of being the beneficiaries of the social contract. In this framework, inequalities of wealth and power are not questioned: there is no critique of the structures of oppression which created sexist ideologies and inequalitarian laws and practices.

Liberal feminism flowered during the First Wave of feminism in the late 19th and early 20th centuries, and was revitalized by 1960s activism. It continues today as a significant force for legal reform and women's political

participation, and its reformist vision inspires the struggles of many Third World feminist politicians, jurists and academics. This is the feminism that motivated the United Nations Decade for Women, and precisely because it did not challenge underlying assumptions regarding the structural causes of gender relations, it has proved an acceptable basis for reform. The document that emerged from the end-of-decade United Nations conference in Nairobi, "Forward Looking Strategies",⁴ exemplifies this point, in its call upon governments to: identify the impact that unemployment has on women; provide employment equity programmes; provide equal access to all jobs and training for women; improve the conditions and structure of the formal and informal labour markets; recognize and encourage the small business initiatives of women; provide and encourage the establishment of child-care facilities; and encourage, through education and public information, the sharing of responsibilities for child and domestic care between women and men" (O'Neil, 1986: 20).⁵ It is under this umbrella that the major proportion of WID research (including the work on women and technology) has been carried out.

2. Radical Feminism exploded into being as a reaction against the sexism of the 1960s radical movements discussed earlier. Fundamentally ideological, in its impetus, it does not form a coherent theory. Rather, it is eclectic, borrowing concepts and language from a several traditions. Notably, it uses Marxist language, applied analogically to women's oppression (Firestone, 1970). Herein lies the great confusion created by radical feminism: a theory explaining women as an 'oppressed class' appears Marxist, but is not Marxist in a rigorous sense. Further, it allows for an ahistorical approach to women's oppression. The premise that patriarchy is universal, preceding and superceding all other forms of oppression, obscures the cultural diversity and historical specificity of human societies. Furthermore, like conservatism, it reduces gender relations to a natural division based in biology. Yet the notion of global patriarchy has a powerful appeal to feminists, and continues to compete for scholarly allegiance. As such, it impedes feminist progress in understanding and acting upon women's oppression, particularly in the Third World. It is in this realm that Western feminism stands accused of ethnocentrism. The moment of truth occurred in 1980 when African women walked out of the Copenhagen mid-Decade conference because the Western feminists presumed to lecture them on clitoridectomy as a 'barbaric patriarchal custom'.

-
- * The adoption of this document, however constrained by the status quo, was in itself a triumph, given the failure of the previous two United Nations Decade conferences to come to a consensus on resolutions to put forward.
 - O'Neil has been Deputy Head of Status of Women Canada, and represented Canada on the UN Status of Women Commission. She played a prominent political role in obtaining a consensus among delegates for the document. In fairness, the last point does get at the heart of gender inequities. It will be interesting to see whether governments who have signed this document will indeed pay much attention to this particular provision. The others remain, however, classically liberal positions, as I have suggested.

Radical feminism has made an invaluable contribution however, precisely because of its ideological power. Because it is a direct response to Western society's experience, its critique of, and action on, Western sexism is highly relevant. Particularly important is its work on sexual violence and pornography (such as Brownmiller, 1976). It has also led the crusade against sex tourism in Asia. Above all, it contributed the insight that 'the personal is political', thereby creating the political space within which gender relations could become a legitimate subject of analysis.

3. Traditional Marxism has, since Engels's important treatise on the family, private property and the state (1970[1884]), rejected the idea of a biological basis to gender differences. Scholars interested in social revolution (e.g. in Mozambique or Cuba) sought to apply Marxist theory to an understanding of women's oppression. Not interested in either Western feminist struggles or in the liberal Third World scholarship on women, they argued that women's oppression is a function of class oppression, which supercedes all other forms of oppression (Urdang, 1979^a). Such an approach is fatally flawed in its reductionism: gender relations are reduced to relations of production. Critics of the application of 'vulgar Marxism' to gender relations have argued that Marxist theory is 'sex-blind', and incapable of theorizing the autonomy of gender relations in human society (Hartmann, 1981). The contribution of this framework, however, is its insistence on a shift from a focus on the individual that characterises both liberal and radical feminism as well as conservatism, to a focus on the structures of oppression: state, family and class. Furthermore, theoretical Marxism provides the underpinning for the fourth framework, socialist feminism. We should note that few feminist scholars now work from traditional Marxist understanding of gender relations.

4. Socialist feminism. According to Jaggar, socialist feminism combines the rigorous historical materialist method of Marx and Engels with the radical feminist insights that 'the personal is political' and that gender oppression cuts across class lines. Through this synthesis, Marxist concepts are expanded to take account of the specificity of gender relations, and the biological reductionism of radical feminism is transcended (Jaggar, 1983). This framework draws widely from cross-cultural and historical studies, which provide the empirical raw material for a rigorous theorization of gender relations. It is no accident that anthropologists are at the cutting edge of theoretical enquiry within the framework.

In the context of African studies, the boundary between socialist feminism and liberal feminism is blurred. Some WID studies, whether overtly

* I do not wish to condemn Stephanie Urdang's work out of hand. In this study and more recent ones (Urdang, 1985) she has performed a valuable service in describing colonial and independence government policy towards women in Portuguese speaking Africa, and has given vivid, insider accounts of women's struggle in these societies. More documentary work of this kind in other regions of Africa would be welcome. Her work is largely descriptive, however, and includes no analysis of sex-gender systems.

inspired by Marxist analysis or not, take account of class relations, the importance of relations of production, and the complex relation between the economic and social realms. In particular, they recognize the concept of contradiction as central to gender relations. Further, they are not satisfied with simplistic universal explanations laying all problems at the door of an ahistorical condition known as 'patriarchy'. In their detailed empirical studies, they have encountered a complexity of gender relations and of women's positions that belies the simplistic sex-class division of radical feminism. In the last six to eight years, the insights from the studies within this combined tradition have added a sharp edge of analytical rigour to the large body of liberal scholarship. Today, in assessing feminist scholarship on gender relations in Africa, it is appropriate to designate a framework that identifies this synthesis. I term it feminist political economy.

C. Feminist Political Economy and the Study of African Women

The power of feminist political economy comes from its ability to recruit non-feminist theories (including Marxism) to its project. Gayle Rubin's germinal work (1975) took the sexist ideas of Freud (on the psychoanalytic theory of femininity) and of anthropologist Levi-Strauss (on kinship systems and women-exchange) and developed them into a theory of "the political economy of sex". Central to her thesis, and to work building on it (for example, Collier and Rosaldo, 1981; Stamp, 1986), is a concept of relations between women and men that are grounded in biological gender but are expressed at the level of society in concrete, historically specific ways. The "sex-gender system" in any society (to use Rubin's useful term) is closely linked to relations of production, but is separate from them and not reducible to them.

Gender relations are not simply an aspect of mode of production, though certain types of gender relations are associated with certain modes of production and to certain forces of production (technology and work organization). For example, the "bridewealth" sex-gender system of Africa is linked to the communal mode of production that characterized precapitalist society, and to its hoe technology (Stamp, 1986). Similarly, the dowry sex-gender system can be associated with the plough technology and tributary mode of production that characterized Asia. With regard to contemporary political economy, studies are beginning to emerge which document the differential impact of capitalism on men and women (for example Robertson and Berger, 1986; Canadian Woman Studies/les cahiers de la femme, 1986; RFR/DRF, 1982). Some of this work is developing a rigorous approach to the relation between sex-gender systems and relations of production. A number of these studies are by African women (Okeyo, 1980; Muntimba, 1982; Mbilinyi, 1984; Afonja, 1986a; 1986b; Obbo, 1986, to name just a few).

The relevance of the feminist political economy approach takes on concreteness and immediacy in the context of current efforts to reinsert women into the heart of African Studies, both in new field work, and in an interpretive reading of older, sexist texts (See Clark, 1980). Examples of the phenomena that may now begin to be adequately theorized are polygyny, and, as suggested above, dowry and bridewealth. Regarding the latter, the approach allows analysis of the custom in terms of a contractual relation that in former times signalled the social and economic worth of women, and provided

the basis for a measure of power (Stamp, 1986). In the present, however, this custom has become articulated with capitalist relations of production. Bridewealth, formerly not a 'price', has become a capitalist transaction putting a price on the heads of daughters. The contract is thus now a commodity transaction, and as such, is oppressive of, rather than empowering for, women. In Zimbabwe, feminists have made the legal abolition of lobola (bridewealth) a priority (See Kazembe and Mol, 1986, for an example of this concern, and for a succinct analysis of the commodification of lobola).⁷

Feminist political economy thus rescues history; but it also has implications for action. By countering the negative image given to many African women in the past, through the restoration of women's centrality and relative autonomy in most precolonial, precapitalist societies, it engenders optimism for the future. The record of women's achievement in the past maps out the possibilities for overcoming the particular forms of oppression that developed in the capitalist era. Further, certain current achievements of women can be understood in a new light: as resistance to oppression rather than simply 'coping with change' (see chapter 4 for an exposition of this argument in the context of a case study on Kenyan women).

The following are questions that are central to the current work of feminist political economy scholars engaged in African studies:

(a) Is the general assumption that women have been universally oppressed accurate? Under what conditions have women held relative power and autonomy, and what factors are responsible for undermining these conditions? African societies on the one hand, and native North American societies on the other, are seen to have provided considerable power and authority as well as autonomy to women (Leacock, 1981; Sacks, 1979; Van Allen, 1972; 1976; Okeyo, 1980). Colonialism and its attendant underdeveloped capitalism are seen as primary agents of the decline of women's power and autonomy, as the above example demonstrates. In a special issue on African women, the Review of African Political Economy (1984) has rectified its earlier indifference to gender relations with a collection of incisive feminist political economy articles which affirm the value of this approach. A substantial portion of its 1986 Biennial Conference in Liverpool was devoted to women's struggles in Africa, and its 1988 conference is to be devoted entirely to political economy and gender.

(b) To what degree has the power terminology of Western society, and the use of unitary concepts such as 'position' and 'role', distorted our understanding of gender relations? The work of Sacks (1979); Schlegel (1977); Leacock (1981); Mackenzie (1986) and others attests to the multifaceted nature of power, decision-making and authority in precapitalist societies, and undermines the conception of a simplistic dominance/submission dichotomy. For example, Sacks argues that African women had more authority and autonomy as sisters than they did as wives. We cannot, therefore, talk of a single high

⁷ Parkin's (1972) study of the Giriama of Kenya provides an excellent analysis of the process whereby bridewealth is commodified in the course of societal transition to a cash economy.

or low position for African women. Role and position, furthermore, are essentialist categories, which exclude a dynamic view of change. The focus on 'roles' is a serious limitation of such potentially influential publications as the USAID-sponsored Gender Roles in Development Projects (Overholt, Anderson, Cloud and Austin, 1985) for example.

(c) To what degree have cross-cultural studies been stunted by the separation of women from the central core of social science analysis, and by the relegation of family relations to the realm of 'women's role'? The focus on 'women's role' often implies that women are more central to gender relations than men, a stance that supports the discredited public/private dichotomy, whereby men occupy the realm of 'public affairs' and women the 'private' realm of the home and family. African studies show that the extended family is the public realm, and that women are economically and politically central to it (see especially Mbilinyi, 1984, on the political nature of women's 'domestic' activity). There is a particular danger in the conceptualization of women as being more central to gender relations than are men. In that they are the chief occupants of what is seen as the sphere of 'the traditional', the separation of women from the core of 'society' constructs them as an anomaly for development, "less easily made into modern economic or political participants than men" (Kardam, 1985:3). Women become 'the problem'.

Increasingly, questions such as these are informing the critiques and analysis of the most fruitful investigations regarding gender and technology. Yet the concerns embodied in these investigations are not yet dominant in thinking about technology and gender; neither have they been operationalized in concrete development research and planning.

CHAPTER 2

CONCEPTUALIZING TECHNOLOGY, GENDER AND DEVELOPMENT

The conceptual approaches dominant within each technology transfer research/action locus may be considered in terms of the broad frameworks of knowledge outlined above. As well, it is possible to identify frames of reference characteristic of the different disciplines involved, from medicine and nutrition to economics and geography to sociology and anthropology. In the case of some loci, the approaches are relatively impervious to the infusion of new ideas, while others are receptive, both to researchers and ideas from other loci.

The most marked phenomenon of the massive WID initiative of the past eleven years has been the constant movement of feminist scholars back and forth between academia and policy-oriented research and action. Scarcely had these scholars launched Women's Studies as a field, and completed their first fieldwork on gender relations, when they were summoned in the mid-1970s to provide critiques of existing development policies and generate guidelines for new directions in development. Kathleen Staudt, Achola Pala Okeyo, Nici Nelson, Deborah Fahy Bryceson, Edna Bay, Marjorie Mbilinyi, Claire Robertson, Shimwaayi Muntemba and Carol MacCormack are just a few of the Africanist scholars who have made substantial contributions both to the theoretical understanding of gender relations in Africa, and to development efforts. When governments, aid agencies and non-governmental organizations recognized the fundamental error of ignoring women, it was the energy and flexibility of such scholars that fueled the gender revolution within these institutions. For them, there was no time to build an ivory tower, and their work, both in academic journals and for development agencies, reveals their grounding in the concrete concerns and urgent priorities of African societies.

For their part, many agencies proved willing to support seminars, research and projects inspired by the concerns of African and Western scholars. The conference on rural development and women in Africa held in Dakar, Senegal in 1981 and co-sponsored by the International Labour Organization (ILO) and the Association of African Women for Research and Development (AAWORD) was an important example of such collaboration (see ILO, 1984). The support by the United Nations Fund for Population Activities (UNFPA) and by the Canadian International Development Agency (CIDA) for a special 1984 issue of Development: Seeds of Change on "Women: Protagonists of Change" is an example of support for research and critique, as is the funding by CIDA and the Women's Bureau of the Secretary of State, Government of Canada, for publication of the special issue of Canadian Woman Studies/les cahiers de la femme, on Forum '85, the conference of non-governmental women's organizations held in Nairobi in July 1985.

Both conceptually and practically, we cannot separate Africa from the rest of the world when considering the subject of gender, technology and development. Scholars have not only circulated between development organizations and academia, but have interacted widely around the world.

Currently, the major method of presenting findings is in books organized thematically that include case studies from each region. These, and the conferences that often inspired them, have provided the occasion for exciting cross-cultural comparison, and for the generation of important general conclusions regarding the impact of development efforts upon women. They have also, through their documentation of the wide variety of sex-gender systems and the concomitant different articulations with the development process, highlighted the importance of cultural and historical specificity in approaches to development. Three major texts on gender, technology and development written in the past five years attest to the value of this approach, in spite of the limitations inherent in their use of a liberal feminist framework: Women and Technological Change in Developing Countries (Dauber and Cain, 1981); Scientific-Technological Change and the Role of Women in Development (D'Onofrio-Flores and Pfafflin, 1982); and Technology and Rural Women: Conceptual and Empirical Issues (Ahmed, 1985).

A. Technology and Development: The Continuing Invisibility of Gender

In spite of the outpouring of information and analysis on gender and development in the past ten years, and the formal commitment to WID initiatives, sizeable portions of mainstream academia, and the research and action loci remain impervious to the challenge to their unexamined assumptions. The intransigence is all the more striking in the light of the cross-fertilization of ideas and flexibility of approach discussed above. The phenomenon must be explained by the continued adherence of many scholars and practitioners to a conservative framework of thought regarding women and gender issues. As stated in chapter 1, such a framework is premised on the notion that gender inequality and a sexual division of labour are natural rather than socially constructed. Ingrained in this thinking is a dichotomy between a 'public', male sphere and a 'private' female sphere. Hence the question of revising an understanding of the 'public' realm of politics and economy in the light of historically created gender relations does not arise. That the public/private dichotomy is based on specific western economic and social practices, is an invisible question itself within this framework.

Compartmentalization of 'the women problem' is the chief means by which gender issues are excluded from socioeconomic study and planning. A telling example of this practice is a new book which is being used as a reference source by World Bank planners: Strategies for African Development (Berg and Whitaker, 1986). This book includes a good chapter on women in development (Guyer, 1986) charting many of the problems of the subject, including a critique of agency programmes in donor countries and a perceptive analysis of the reasons for women's invisibility. Yet this volume of 603 pages indexes the topic 'women' in only one other chapter, that on education, where inequalities for women in education are briefly mentioned and decried. Nowhere else in the volume is gender taken into account: indeed, the chapter on technology, entitled "Manpower, Technology and Employment in Africa" (King, 1986) is notable for its neglect of the issues so dramatically documented in a host of studies over the past ten years. Instead, technology is treated as a problem in training for its use, construed in terms of gainful employment, whether in the formal or informal sector, in the factory or on the farm (431-442).

In this text, it is thus possible for Guyer correctly to identify "current indigenous practices and small scale intensive enterprises" as a potential development asset (1986: 406), while Hyden (1986: 55-63) argues exactly the opposite: he derogates the "economy of affection" that he sees as characterizing African societies¹ and suggests ways in which the "uncaptured peasantry" may be captured by the internationally integrated national economy.

The World Bank has contributed to the ghettoization of the gender issue. While the organization has identified the problem in a publication titled Recognizing the 'Invisible' Woman in Development: The World Bank's Experience (World Bank, 1979), its major policy documents on Africa perpetuate that invisibility in the arena of major economic policy initiatives. The practice is deeply problematical given that these initiatives help shape the agendas for African governments' financial programmes and development plans. Two years following the publication of the above-mentioned document, the influential Accelerated Development in Sub-Saharan Africa: An Agenda for Action (World Bank, 1981 -- the so-called 'Berg Report') included no text or tables referring to women or gender. In its chapter on "Basic Constraints" it identifies underdeveloped human resources as one of the "internal 'structural' problems" that are "obstacles to growth" (9-16); nowhere does it mention women as one of these 'underdeveloped human resources'. Even in discussing agriculture, health and population, it fails to identify the necessity of including women in planning for development. The chapter on human resources (81-90) is deficient in the same respect. Technology is not treated as a distinct problem, but rather is an aspect of manpower problems.

The most recent policy document on Africa, Financing Adjustment with Growth in Sub-Saharan Africa, 1986-90 (World Bank, 1986), takes the same approach. Focussing primarily on the structural reforms perceived as a necessary response to economic crisis and required by the IMF, the document criticizes African policies which "discriminate against agriculture and favor the urban sector" (18). Yet the policies it favours regarding agricultural development are those geared towards further integration of the agricultural sector into the world economy, without consideration of the well-documented problems for women -- and indeed for families -- of intensified cash crop production. Further, the recommended incentives for farmers (20) take no account of the differential impact of such inducements upon men and women, and hence, given women's importance in agriculture, the likelihood of their failure. Once again, the social dimensions of technology transfer are not treated as a discrete issue for consideration. The report simply states: "Most observers agree that the technology shelf in sub-Saharan Africa is nearly bare. Most farmers make little use of fertilizer, and hand-hoe

¹ "The economy of affection denotes networks of support, communications, and interaction among structurally defined groups connected by blood, kin community or other affinities such as religion....The economy of affection is the articulation of principles associated with 'peasant' or 'household' economics...." (58).

cultivation is still the most common."² From such an analysis, the report is content merely to propose the development of research capacity as the solution (32).

In contradiction to its approval of the fact that "the thrust of structural adjustment in Africa has been toward a greater role for prices, markets, and the private sector in promoting development," the World Bank argues for stronger involvement of governments, which should make a concerted attack on the "constraints on growth". In particular,

On issues such as family planning, resource conservation, and agricultural research, governments must commit themselves to change and promote a social consensus in its favor. Consensus must spring from a clearer understanding of the link between these long-term factors and prospects for a better quality of life (25).

This report carries serious questions regarding the propriety of a multilateral agency issuing directives bearing upon internal political processes, particularly in that the World Bank is dictating the policies for which governments are required to mobilize support. This is a fundamentally undemocratic action. Apart from this impropriety, there are other serious limitations to the document. Nowhere does it address the importance of drawing in women as participants in such a consensus. Moreover, there is a serious question as to whether a consensus can be generated around the change that the World Bank envisages as self-evidently desirable, when policies geared towards such change have at best neglected women, and at worst seriously disadvantaged them. Finally, the World Bank assumes that development initiatives flowing from the top down can be successful: ordinary people's role is simply passively to accede to a consensus on government policy. Most of the research on women and development, including that on technology transfer, has shown the poverty of this approach (the ability of the measures to achieve their stated

² In contrast to this opinion, numerous studies have shown that the land hoe, labour-intensive as its use is, is the most appropriate piece of technology for retaining women's control over food production. Once farming is mechanized, women lose control of the crop, and subsistence crops give way to cash crops. See the synopsis of Muntemba's Zambian study in chapter 4 for a sobering account of the consequences for national production of introducing mechanization to the family farm: women report deliberately reducing their production because of their husbands' control of the technology and the lack of legal title to the machinery (implements pass to the husband's relatives rather than to wives and children upon their death). What this suggests is that there is no straightforward relation between agricultural productivity and labour-saving technology in Africa. Families eat if their female members wield the hoe: it would not be extreme to suggest that, to the extent that Africa can still feed itself, it is the hand hoe that feeds it. The neglected connection between food self-sufficiency in Africa and women's agricultural production is also explored in chapter 3.

macro-economic goals in the long term, itself a highly controversial issue, is beyond the scope of scrutiny here. For an exploration of the negative political implications of the World Bank and USAID's policies pushing 'economic liberalization' in Africa, see Mosley [1986]).

The approach has set a bad example for African governments: during the United Nations Decade for Women, women and gender issues continued to be prominent in their absence from concrete African governmental planning. For example, the Kenya Development Plan 1984-1988 (Kenya, 1983), while it discussed briefly the employment problems of women (9) and called for "special policy measures" to tackle them, suggested no concrete guidelines for such policy. Furthermore, the relation of gender issues to problems of development in health, nutrition and agriculture was not even raised.

At the international level in Africa, radical critique of development theory and policy has filtered into collective responses to agency and donor programmes. The Organization of African Unity (OAU) has taken issue with the vision of development promulgated by the World Bank and IMF. In its Lagos Plan of Action for the Economic Development of Africa, 1980-2000 (OAU, 1980) it emphasized the negative effects of world economic trends upon African development and urged that African countries collectively generate their own strategy for development; in vigorously implementing this strategy, they should "cultivate the virtue of self-reliance" (OAU, 1980: para 4). But in this worthwhile vision of self-reliant development, once again women remained largely invisible: AAWORD commented on the Plan:

It is worthy to note that a chapter was dedicated to women and in it the role our Association among other women's groups can play in the creation of equal opportunities for women has been recognized. In the debate that followed the dissemination of this document, we have both appreciated the attention given to the issue and criticized its compartmentalization as a chapter. In other words, we argue that women's absence as well as presence in major concerns such as agricultural development, industrialization and the development and transfer of technology, educational and health programmes should be included within the major analysis and not as an aside. Presently we continue to argue that emerging development theories and strategies are faulty and incomplete to the extent that they fail to include gender as one of the major analytical categories (AAWORD, 1985: 2).

The "stubborn obliviousness", as Henn calls it (1983: 1043), to the overwhelming evidence regarding the importance of gender relations and the vital economic role of women in African society, is not the only reason for women's invisibility in the realm of technology and development. By the nature of the specialized fields that bear on development policy, there is a structural separation between research efforts in different areas involving technology transfer. The otherwise excellent research that has been done by the IDRC exemplifies this problem. In the area of agricultural research, for example, an 'inventory methodology' is used, whereby research is classified according to each commodity. The workshop on "Resource Allocation to Agricultural Research", held in Singapore in 1981 (IDRC, 1981), which was structured by this methodology, affirmed its utility, given its widespread use

and its value as a comparative tool. Nevertheless, the workshop admitted the limitations of the approach:

All of the country studies classified research activities on a commodity basis. There was considerable support for such a classification on the grounds that it was easy to prepare and of immediate use. It was recognized, however, that a commodity classification may not be useful in readily identifying research activities directed to planning and development objectives that have a strong socioeconomic element, such as farming systems, integrated rural development, and transmigration programs (IDRC, 1981a: 12).

In other words, commodity-by-commodity study makes it difficult to address the larger question of technology transfer as it relates to gender issues, amongst other 'socioeconomic elements'.

Other research efforts have made a more sustained effort to bring discussion of the technical and the social under one roof. The training workshop for "Rural Water Supply in Developing Countries" held in Malawi in 1980 (IDRC, 1981b), for example, presented a section on "technology" which included technical findings and research on training, while social factors were addressed in a section entitled "Operation and Maintenance". On a subject that comes close to the heart of the development problem for women, however, the procurement of water, most of the technical and training studies drew little from social analysis. One thus saw the anomaly of a paper highlighting the importance of including women in water development projects in Kenya (Getechah, 1981), while her countryman delivered a paper on training for water development in Kenya that made no mention of women's primary responsibility for water procurement, and that made no suggestions regarding the training of women in this field (Shikwe, 1981). A conclusion drawn by Sue Ellen Charlton from her experience in a USAID workshop on women in international development is probably relevant in the case of the water supply workshop, as well as in most seminars regarding technology and development. She found that "although there was ignorance of technical areas among most social science students...many students from professional fields such as nutrition and agronomy were ignorant of the basic political, social, and cultural realities of development" (Charlton, 1984: xiii).

I have dealt at length with the boundary problem, whereby the analysis of gender is either ghettoized or not integrated into technical subjects, because this is probably the most serious problem facing both further fruitful research on development, and the generation of adequate development policy. I address this point further in Part III.

B. Gender, Health and Nutrition: Conceptual Approaches

Health and nutrition are areas conducive to the specialist compartmentalization discussed above. Sometimes as a result of the structural requirements of specialist knowledge, but also often because of unexamined assumptions regarding the appropriateness of western medical practices and nutrition inventories, indigenous practices and eating habits well adapted to the social and physical environment are given short shrift.

In particular, African women's expert knowledge has tended to be ignored (some notable exceptions regarding traditional medicine include studies on the value of indigenous midwifery, such as Gumede's [1978] study of Zulu obstetric medicine). Yet neither the general WID literature nor the more specialized women and technology literature has much to say about health technology, its impact on women, or women's influence upon the absorption of such technology. The feminist political economy scholarship has neglected this area as well. The critique of health technology transfer in the Third World falls, therefore, to a disparate assortment of interdisciplinary journals and political economy studies, discussed below.

Research on health and nutrition in Africa, presented in a number of medical journals, is characterized by a large number of statistical surveys and an abundance of data (see, for example Ogunmekan, 1977). Given that the involvement of women in health and nutrition, as mothers and as primary caregivers, is more self-evident than their contribution to production, the literature targets them explicitly in a way that the economic literature does not. However, it focusses upon women on the one hand as individuals, and on the other hand as passive recipients of health and nutrition programmes, rather than as active agents shaping the absorption of programmes by the community. See, for example Oleru and Kolawole (1983) who conducted a random sample of 500 pediatric case notes and interviewed 200 mothers attending a pediatric emergency unit in Lagos Nigeria. In this study, they limited their enquiry to the impact of housing, water supply, sewage disposal and the educational status of mothers as factors bearing upon their children's health, to the neglect of dynamic and community-related aspects of maternal decision-making. Another study on accessibility to rural general hospitals in Nigeria (Okafor, 1984), defined accessibility narrowly, in terms of barriers. The measure of these barriers included "distance travelled, travel mode, travel cost and treatment cost" (663). Inaccessibility is seen as a "syndrome of deprivation", to be corrected by better allocative decisions by local authorities.

The focus on better rural health care delivery in this study is laudable; its conclusions are of limited value, however, in the light of its neglect of gender factors affecting accessibility. An example of such factors, which any Nigerian study should take into account, is the Muslim practice of secluding women: precisely the people responsible for health care within the family. (see Callaway, 1984). Within a frame of reference that treats the issue in terms of individual women who are passive recipients of care, the only practical policy recommendation possible is to raise the educational level of all mothers: a simplistic solution indeed.

The boundary problem, whereby medical researchers are unable to draw upon the insights of social science research, is demonstrated in many studies. Rehan's (1984) investigation of "Knowledge, Attitude and Practice of Family Planning in Hausa Women" (1984) exemplifies the problem. Employing a widely used methodology known as a KAP (knowledge, attitude and practice) survey, the study covered 500 fertile Hausa women of northern Nigeria "to test their

understanding about family planning and reproductive biology."³ In identifying education as the predominant factor affecting family planning attitudes, and excluding structural societal factors from its scope, the study once again was operating from a framework of the individual rather than the social. The author felt no responsibility to consider the numerous anthropological studies on Hausa women. As a consequence, a socially functional practice such as multiple marriage is characterized as "marital instability", a designation that is more an ethnocentric judgement than an accurate description of Hausa gender relations (see Cohen's [1969] classic study for an insightful analysis of the social relations of gender involved in multiple marriages among the Hausa. Both alternating periods of single and married life, and numerous children, are a rational strategy on the part of Hausa women in the context of urban life). Studies underpinned by such judgements are forced to such unscientific conclusions as the following assertion by Rehan: "This population places great emphasis on a large number of children, either for reasons of self-pride or of fatalism" (843).

Another example of the limitations of this methodology, and of the boundary problem, is a nutrition study of 250 low-income pregnant women in Zaria, Nigeria, regarding their attitudes and infant feeding practices (Cherian, 1981). This substantial survey concluded that 66 percent of the women surveyed used commercial milk formulas for no particular reason. The fact that fathers purchase formulas, mentioned by some respondents, was not suggestive to the researcher that complex aspects of marital decision-making patterns might indeed provide a "particular reason". Further, the larger question of the power of symbolism to generate a dominant discourse on health which promotes commercial solutions to infant care, cannot be conceptualized within this framework of the individual.

Some studies do indeed refer to community decision-making and social factors: however, there is little attempt to investigate the nature of community in depth. For example, a comparative article on primary health care in Nigeria, Sri Lanka and Tanzania (Orubuloye and Oyeyye, 1982) stressed the importance of community participation as a component of the Nigerian Basic Health Services Scheme (BHSS), and criticized national and state governments on the grounds that "little attempt has been made to carry the people along with the programme" (679). The authors' notion of such participation is financial contribution on the one hand and acquiescence to government programmes on the other. They applauded "communities and their leaders [who] generously donated land and cooperated with the officials responsible for the implementation of the scheme" (679). In referring to lack of community participation as a constraint, the article make no attempt to consider the possible deficiencies of the BHSS in terms of lack of community input to the programme. Here, the approach is the same as in a framework of the individual, with the community rather than the individual being treated as an essential category and a passive recipient of top-down directives.

³ Rehan acknowledges that the KAP survey methodology has been criticized. See, for example, Wicker, (1969).

Certain journals dealing with health and nutrition have attempted to synthesize medical and nutritional analysis with social science approaches. Social Science and Medicine, and the International Journal have sought to bridge the gap between the two. The editor of the former journal called in 1981 for "more scope for the social scientist". Cautioning that the current "curative enthusiasm" (for example regarding oral rehydration packages and education aimed at health specialists) should be "coupled with preventive caution and more emphasis...on better water supplies and sanitation," he listed the issues, topics or programmes of concern to developing countries that require an interdisciplinary partnership.

Breast feeding and supplementary feeding; diarrhoeal disease and water and sanitation; disabilities and handicaps; logistics and drug and vaccine delivery; refugee health; monitoring, evaluation and indicators; appropriate technology; and Primary Health Care, which also embraces the above. These issues are of great current concern and form the basis of projects or programmes into which bilateral and multilateral assistance is being channelled in large amounts. However, there seems to have been little involvement of social scientists as reflected either by their activity in the field, or by their recent publications (Bennett, 1981: 233).

An example of the more sophisticated analysis possible as a result of such synthesis is Igun's (1982) study of child-feeding habits in Maiduguri, Nigeria. In a survey of 250 low income women, similar to Cherian's (1981) study cited above, Igun was able to locate the adoption of bottle feeding by these women in western industrial culture, and in particular in "mass media advertisement and the example of elite mothers whose visibly displayed adoption of bottle-feeding elevates it to the status of a fashion in the eyes of" lower income mothers (769). Once the problem is identified in this way, in terms of social context, solutions may be devised that directly address the cultural dislocation.

Some studies on community involvement in health care have been concerned with the dialectical relation between health plans that are introduced and local culture, including the indigenous medical system. Two studies in Kenya exemplify this approach. (Feuerstein (1976) argues for a "comprehensive community approach" to rural health problems, and in particular for the inclusion of women in decision-making, both to improve their own health and hence their contribution to social change, and to equip them to fulfill their health care responsibilities more effectively. Were's (1977) study surveyed 400 village women to determine their attitudes towards equal rights for men and women, and discovered that women consider their participation in the community to be hampered by their more limited opportunities in comparison to those of men. The women themselves argued that better education would improve their community involvement and enhance family health. An excellent symposium on "Health Needs of the World's Poor Women", sponsored by the Equity Policy Center in 1980 (see Blair, 1981), explored every aspect of women's involvement in health care provision, and presented exemplary case studies. It appears from the literature since the two 1970s studies and this conference, however, that such an approach has not worked its way into the general medical

scholarly framework; neither have its conclusions been operationalized to any great degree.

Nutrition is another area requiring a synthesis of social and technical analysis. In many studies, western concepts of appropriate diet are applied uncritically. An important study prepared for the Institute for Development Studies in Sussex points out the hazards of this approach. I cite Jill Gordon's report (1984) at length because it summarizes so concretely and well both the problems of ethnocentricity in nutrition education, and the need for a detailed local understanding in order to uncover its negative impact. Beginning with the assertion that "nutritionists are often less willing and able to research the underlying basic causes of malnutrition to do with social and economic factors and processes", she records her field experience, under the heading "Eat More Eggs and Oranges":

Equipped with a BSc Nutrition (London) and great enthusiasm, my career began with the Ministry of Health, Zaria, Northern Nigeria in 1966....My inherited tasks were to run a nutrition rehabilitation unit, to teach mothers at clinics, and to train local auxiliaries. These were the universal nutritional messages at this time: start to give supplementary foods at the age of three months; make a soft 'pap' with water and cereal flour; add mashed or pounded protein-rich foods to the pap, for example egg; [and] give young children plenty of vegetables, mashed fruits and juices, for example, orange juice. We energetically spread these messages to as many mothers as possible. The year passed with little feedback from our clients and no formal evaluation. In common with many nutrition educators, we did not know whether our activities were useful or not (38).

On evaluating the results of a study she conducted in 1969 to measure the results of such nutritional training, she found that "nutritional status measurements suggested that nutritional education was having a negative impact on nutrition." Her conclusions were that:

the costs of earlier supplementary feeding may outweigh the benefits in a poor, insanitary environment. Watery, contaminated paps will cause earlier diarrhoea....Pap is less nutritious than breastmilk even if an egg is added. The local weaning food...is a soft millet dough, saab, with dark green slippery leaves and fermented locust beans, davadawa. This is easy to swallow, tasty and given between the ages of seven and 12 months. It is more nutritious and safer than the pap and egg because it is fermented, preserved with ash salts, and contains less water and animal proteins. The local weaning practices probably worked better in this situation than imported, 'optimal' practices. Many nutrition educators 'blame the victim' and aim to change the practices of individual mothers. Advice does not deal with real problems or match the resources and opportunities of the mother. This type of education increases guilt and anxiety but does not enable parents to change their situation. Nutrition education rarely involves dialogue and the information controlled by 'experts' changes every few years. As indicated above, in cases it may be dangerously inappropriate. Participatory research is needed to understand what prevents parents from

feeding their children as they would like.... (39)....Personal experience has taught me that many nutritional messages which seem logical in scientific isolation are absurd in practice (42).

What this study is doing, as well, is challenging the developmentalist adherence to the notion of a traditional/modern dichotomy, whereby traditional beliefs and practices are assumed to be obstacles to progress. While there is no doubt that all food preferences are not necessarily nutritionally sound (as our own society all too well demonstrates and as structural anthropology such as the work of Mary Douglas explains), more care has to be taken to uncover the indigenous logic of dietary practice, as well as to expose contemporary distortions of previously sound nutritional habits. Studies such as Ojofeitimi and Tanimowo's (1980) research on nutritional beliefs among pregnant Nigerian women, where they argue that traditional beliefs are the principal obstacle to good diet, exemplify the lack of such care.

In a wider context, there is a body of political economy literature that challenges the method of transfer of medical technology and enterprise from the west to the Third World, seeing it as a part of the functioning of the "capitalist political-economic world-system" and as an aspect of a "worldwide cultural hegemony." Elling (1981) summarizes this conceptual approach to the problem:

A number of world health problems which have been discretely considered in the past are viewed...as interwoven with each other.... Thus, climactic explanations ("tropical medicine"), and even poverty when conceived in cultural terms or as a structural problem resident entirely within a single nation, are seen as inadequate for understanding any or all of the problems... [These are] poor general health levels in peripheral and semi-peripheral nations, especially rising infant mortality rates in countries such as Brazil; commerciogenic malnutrition; dumping and exploitative sale of drugs, pesticides and other threatening approaches to population control; export of hazardous and polluting industry to peripheral and semi-peripheral nations; similar export of human experimentation; the sale of irrelevant, high medical technology to countries lacking basic public health measures; the "brain drain" and medical imperialism (21).

The approach also discounts

moralistic inveighing, complaints about inadequate information and its transfer, discussions of bureaucratic bumbling or inter-agency politics and professional rivalries, various forms of victim-blaming, and other explanations and corrective approaches which ignore class structures and the control, distribution and expropriation of resources in nations and the world-system (21).

As long ago as 1974, the Director General of WHO, Dr. Halfdan Mahler, pithily described the situation that the organization was required to address, in terms of this political economy critique:

The general picture in the world is of an incredibly expensive health industry catering not for the promotion of health but for the unlimited application of disease technology to a certain ungenerous proportion of potential beneficiaries and, perhaps, not doing that too well either (Mahler, 1974: 1-2).

In this framework, which includes two important texts (Imperialism, Health and Medicine - Navarro, 1981; and The Political Economy of Health - Doyal, 1981⁴), medical technology is removed from the realm of the material and placed within the sphere of the social; its transfer is seen as a profoundly political act having far reaching economic, as well as social and physical consequences. Further, Africa's health problems are given a historical context. Doyal, for example, discusses the effects of colonialist expansion upon health, and conversely the contribution of European disease transmission to colonial domination:

From the sixteenth century onwards, European expansion unleashed a series of catastrophic epidemics in every corner of the globe....The intention here is not to apportion moral blame, but to make clear the objective significance of this process in the particular context of capitalist development. although the spread of infection was often unintentional, it clearly reinforced the genocidal policies carried out in many white settler territories, as well as weakening resistance to imperialist domination elsewhere. Epidemics also helped to destroy the economic and social foundations of indigenous communities and the resulting disintegration and impoverishment greatly facilitated the establishment of colonial hegemony (Doyal, 1981: 101-102).

With regard to African nutrition, Doyal is also precise regarding the historical dimensions of the problem:

The health of the indigenous populations has also been seriously affected by the wars which accompanied imperialist expansion. We can see this very clearly if we look at the experience of East Africa during the late nineteenth and early twentieth centuries, when it was torn by resistance struggles and also by the fighting between rival imperialist powers. In the case of Tanganyika in particular, early military intervention was required to deal with a growing resistance struggle....Villages were burnt and harvests destroyed....The repeated devastation of farmland over a thirty-year period had enduring structural consequences. It not only undermined the economies of some of Tanganyika's major peoples, but crucially reduced the capacity of the countryside to feed the remaining population. Thus much of the malnutrition and disease which came to characterise rural Tanganyika in the twentieth century was in a very real sense a product of early colonial repression (102-103).

⁴ See also the Review of African Political Economy's (1986) special issue on "Africa -- the Health Issue." The volume includes covers a variety of important topics, including health aid.

It is on the basis of such analysis, for the present era as well as the past, that Doyal asserts that none of the specific dietary deficiencies causing chronic diseases, "serious as they are, should obscure the fact that malnutrition in the third world today is primarily due to a general lack of basic sustenance. People simply do not get enough food ever to be healthy. Hence it would be more accurate to describe the problem as one of under-nutrition, rather than malnutrition" (98). The distinction is an important one: 'malnutrition' carries the connotation of incorrect diet that is the fault of individuals, while 'undernutrition' compels thought about structural causes of poor diet.

Such concrete historical analysis, and clarification of the underlying assumptions regarding health problems in the Third World, is a corrective to the fallacy that Africans are primordially disease-ridden and backward, and that disease is a purely 'natural' category. Once this approach is accepted, then the focus on removing 'traditional obstacles' to health modernization (the tradition/modernity dichotomy once again) ceases to appear as a viable solution to be sought by health policy. Instead, it becomes self-evident that solutions can only lie in the realm of policy that is oriented towards social and political processes and designed to build upon local initiatives and expertise.

As is characteristic of the political economy school in general, the literature on the political economy of health does not focus consistently on gender relations as a necessary part of the analysis. Reference to Third World women generally renders them passive recipients of negative health policies, as in the case of experiments using them as subjects for testing birth control substances banned as unsafe in the west (Doyal, 1981: 283). Once again, women's active agency in health care, and the impact of health technology upon their ability to carry out their customary responsibilities, is passed over.

The absence of analysis of gender relations within this and other frameworks leaves a serious gap in the understanding of an area of health that is becoming of increasingly urgent concern in the present: that of venereal disease. Van Onselen (1976) conducted a rare study in Southern Rhodesia (now Zimbabwe) that explored in depth the political and economic factors contributing to the promiscuity among urban African populations that is so uncharacteristic of indigenous African societies. Both men and women were proletarianized in the colonial era: males as migrant workers in industry, and females as prostitutes, who out of economic necessity migrated to the compounds to serve the men. On the one hand, the care given by the prostitutes to miners subsidized the industry by relieving it of responsibility for employee health care; on the other hand the phenomenon contributed to the massive spread of venereal disease.

Syphilis derived from conditions of the compound....The mass of workers came to the mines without their women, and from the very earliest days of the industry prostitutes were a feature of compound life: throughout this period they actually lived inside the compounds themselves. Since their services did much to attract and stabilise labour, mine management and state alike were unwilling to eliminate it, in spite of its direct

contribution to the spread of a deadly disease throughout the black work force (Van Onselen, 1976: 49).

The study is exhaustive in its analysis of the breakdown of traditional sexual relations, and the establishment of the damaging patterns that still characterize African cities today. In the light of the present AIDS epidemic, such an understanding of the relations of sexuality in all their complexity is the most urgent health task facing Africa. For example, the most recent information from East Africa reveals that major paths of AIDS dissemination are through long-distance truck drivers, and through a large group of Nairobi prostitutes visiting their homes in Tanzania (Richard Wilson, IDRC Director of Health Sciences, personal communication, September 1986; Globe and Mail, 23 May, 1987).

According to the above review, the health literature that takes account of social factors falls into two of the conceptual frameworks discussed earlier, and shares the limitations of each. The liberal medical and nutritional scholarship characterized by some of the publications in such journals as Social Science and Medicine focusses on the individual, or on communities as aggregates of individuals, as the locus of health care problems. Within this framework it is difficult to generate a dynamic understanding either of gender relations as they interact with technology transfer, or of the collective agency of communities as a primary influence on health technology absorption.

Political economy critiques of international health systems do provide a dynamic understanding of the dialectical relation between health technology and Third World communities, but this understanding is marred by an economic reductionism that grants no autonomy to gender relations as a powerful shaping force in society. In spite of its limitations, however, this approach creates the space for analysing the role of gender relations, in that it starts from the premise that structure and process (particularly historical process) are important, and that contradictions exist within and between societies. Given the boundary problem in the sharing of knowledge, however, we can question whether the insights of such thinkers as Doyal and Elling -- and indeed, many WHO officials -- are informing the methodology of current health and nutrition researchers.

C. Conjuring Women and Gender Issues in The Research/Action Loci

It is important not to cast aid agencies as monolithic institutions. Different branches of the organizations have differing levels of commitment to the issue of gender, and different feminist frameworks may inform researchers within these branches. It is a reasonable generalization, however, to assert that WID offices often stand in some degree of isolation from the rest of the institution: once again, women and gender issues being considered as an 'aside'. Furthermore, organizations customarily disassociate themselves formally from the conclusions reached in commissioned studies. Actual organizational policy may thus often be less progressive than the course of action suggested in the research published by the organization.

USAID is a case in point. In response to 1973 Congressional action, a Women in Development Office was set up in the organization. According to a Policy Paper issued in 1982, summarized by the Director of the Office in her introduction to Gender Roles in Development Projects (Overholt et al, 1985), "one of the premises of A.I.D.'s women in development policy is that gender roles constitute a key variable in the socio-economic condition of any country -- one that can be decisive in the success or failure of development plans. Additionally, the policy paper stated that it is critical now for AID to move beyond its initial activities, taking an active role and providing leadership to ensure that women have access to the opportunities and benefits of economic development. The paper also clearly stated that the responsibility for implementing A.I.D.'s women in development policy rests with all of A.I.D.'s offices and programs at all levels of decision-making" (Tinsley, 1985: xi). One example of the many studies commissioned to contribute to this initiative is Isely's (1984) excellent review of the literature about the impact on fertility of rural development strategies regarding health and nutrition. Isely charts four approaches to rural development, paying particular attention to the importance of community participation and improved local food production in development strategies. The value of this study lies in the way in which it focusses on structure and process in the community, including the involvement of women, and its emphasis on the health status of women and children as key indicators.

Yet in spite of valuable research efforts, a 1985 study of aid and women by Staudt (1985a) shows that only 4.3 percent of regional bureau funding for USAID projects in Africa went to projects that were either specifically directed at women, or had a component including women, while only four of 45 agricultural projects designated women as beneficiaries. The pattern uncovered in USAID, where sufficient resources are allocated to mount a WID programme but not to carry it out effectively, is charted for the United Nations and other organizations as well. Between 1974 and 1980, a period which included half of the UN Women's Decade, only 4 percent of projects involved women's participation, and of these, half had only a minor level of participation by women (United Nations Development Programme, 1982).

Guyer sums up the difficulties inherent in WID programmes:

Women's offices seem to have intrinsically incompatible aspects to their mandates. Research in technical areas, from tax policy to crop rotations, requires integration into the rest of the technical community. Political action, on the other hand, such as advocacy of a women's perspective within the organization as a whole, lobbying for more funding for women's projects, or the maintenance of links to other women's groups, demands cross-disciplinary organization and a somewhat more confrontational collective stance. Working on project administration involves yet another kind of structure defined by authority and cooperation. Individuals may be able to do all of these at once, but an organization runs up against the limits to flexibility in level of expertise, loyalty, collective morale, and so on. This is all the more problematic when the issue itself is as controversial as that of "women," and adversaries are looking for ways to avoid dealing with it (1986: 416).

In the light of this well-documented experience, the priority to be placed on increasing "the knowledge of gender issues among USAID personnel" indicated by Tinsley (1985: xi), and consequently the publication of such books as Gender Roles in Development Projects (Overholt et al, 1985), would seem to represent an admirable effort, but one of little utility in overcoming the structural and political constraints within aid organizations. Certainly, a USAID research effort on the same subject nine years earlier, Women in Rural Development (Mickelwait, Riegelman and Sweet, 1976), did not have an impact on the boundary problem.⁵

In the intervening years, certain research/action loci have been able, by the nature of their mandate, to take a less ambivalent position on gender and development. Some have been particularly concerned to draw in African scholars and practitioners, and to encourage a stance critical of development theory and policy. The ILO will be taken as one example, although other research/action loci have made similar contributions.⁶ By the fact of its connection to labour movements and its overtly progressive raison d'être, the ILO has been a leader in this regard. According to Dharam Ghai, the Chief of the Rural Employment Policies Branch of ILO, "with respect to rural women workers...the approach has been to focus on critical but neglected questions,

-
- ⁵ Rogers (1980), in her chapter titled "Inside the International Agencies" (48-58), provides a trenchant account of the problem, and some wry commentary. She gives examples of her conversations with planners, such as the following visit with senior officials of a World Bank project:

'Meet Barbara Rogers, she's visiting this project and wants to know what we're doing for women. I warn you though, she's a feminist.' Embarrassed silence.

'Well, actually I don't think there's anything of much interest to you here. Perhaps UNICEF can show you something. We're a huge program, millions of dollars, a consortium of agencies, got a job to do, and we haven't got any time for special projects.' (55).

- ⁶ The Dakar, Senegal 1982 seminar on "Another Development With Women", funded by the Dag Hammarskold Foundation with proceedings publication supported by SIDA (Development Dialogue, 1982), is a particularly significant case from the point of view of African women. The seminar provided a forum for the promulgation by AAWORD of a policy of intellectual indigenization, both of research and of development action (see chapter 4 for a synopsis of an excellent research contribution to this conference [Muntemba, 1982]). A 1984 conference in Nairobi on women and development co-sponsored by the Journal of Eastern African Research and Development and the Ford Foundation was another such occasion, one that provided the opportunity for African feminist scholars to act upon their asserted prerogative to speak for themselves (see Were, 1985). Flora's (1982) "political phenomenology of a private foundation" is an interesting account of Ford's struggles to incorporate WID programmes.

to build up a knowledge base for launching of practical programmes and to encourage involvement of researchers and NGOs [non-governmental organizations] in grass-roots action with women's groups...." (ILO, 1985: 4). Among its significant contributions in the past eight years have been an African and Asian Inter-regional Workshop on Strategies for Improving the Employment Conditions of Rural Women, held in Tanzania in 1984 and co-sponsored by DANIDA (ILO, 1985); a Tripartite African Regional Seminar on Rural Development and Women held in Senegal in 1981 (ILO, 1984); and a conference on women and rural development held in Geneva in 1978 (ILO, 1980). In addition, the organization has commissioned numerous studies such as Employment Problems of Rural Women in Kenya (Feldman, 1981). With regard to women and technology specifically, the ILO was responsible for commissioning the most important recent overview, Technology and Rural Women: Conceptual and Empirical Issues (Ahmed, 1985).

In the context particularly of the seminars, an Africa-centred feminist political economy voice is emerging. The 1985 Workshop in Tanzania, attended predominantly by African women including several outstanding scholars, is evidence of this. The Workshop was the outcome of "a common concern among women researchers in Africa and Asia to move away from pure research identifying why rural development has not helped women to documenting initiatives which are working in some way to improve the economic and social conditions of poor rural women....The participants, both women and men...were acutely aware of the processes that were pauperising and marginalising a large section of the rural population, particularly women..." (ILO, 1985: 1-2). The Workshop's summary of its critical discussion on women's projects/programmes demonstrates the participants' sharp judgement of existing approaches to rural development:

The problems of adopting a "project approach to development" in general and women's projects in particular, are many. The "project approach" is often reformist in character and does not plan for or contribute to structural changes. It is generally top heavy in administration and has limited multiplier effect. In many instances, women's projects and programmes marginalise women's concerns instead of integrating them in mainstream development. They are often designed as hobbies -- part-time activities to give women supplementary income and ignore women's main economic activities and their critical need for full-time employment and income to sustain themselves and their families. They generally maintain and replicate the existing sexual division of labour and do not give women skills and knowledge to adapt, change and advance with changes in technology and labour markets....

[However] it was argued that the "project" approach was necessary because most national development plans and programmes are broken down in the form of projects and projects are one way of demonstrating what can be done to field level bureaucrats and implementers who may otherwise either lack the initiative to launch a programme or resist it. In addition, projects/programmes can provide poor women with opportunities to handle resources, manipulate power and make decisions -- opportunities which many of them would not have in the absence of these projects. The importance of this experience in tackling the issues of underdevelopment and dependency was emphasized (ILO, 1985: 6-7).

Behind this general statement is a very sophisticated and historically detailed understanding of the nature of African gender relations, women's economic participation, and the realities of contemporary national and international political economy. It is from the insights of such collective pragmatic thinking by African scholar/practitioners that new directions for research and development planning may fruitfully emerge, as chapters 3 and 4 suggest.

Obvious sources of an impetus to indigenize research on women in Africa are the regional organizations that have been set up to promote women-related research. AAWORD has already been mentioned. It has taken the approach, through the seminars it has participated in and the publications it has promoted, that research on African women should be in African women's hands. As Mbilinyi put it:

AAWORD arose partly as a reaction against the onslaught of WID researchers from outside, descending on African countries to extract information about African women, get their degrees and promotions on the basis of publications written for a non-African audience, and ultimately take the knowledge away with them. African researchers faced growing competition from foreign researchers who had an unfair advantage in that they had much greater access to research funds and publication possibilities (Mbilinyi, 1984: 292).

Mbilinyi sees, however, that "the drive to decolonise African Women's Studies has necessarily developed in contradictory directions." Elite African women are able to monopolize access to research opportunities and to funding; many follow the conceptual approaches laid out by Western liberal scholars. Another group seeks to take a more critical stance, and to align itself with ordinary African women. The predominant view in AAWORD which has led to the exclusion of all but racially-defined African women allows class inequality to remain invisible. In Mbilinyi's eyes, this tendency "represents a mirror image of colonial racism in South Africa." The group opposing this line is struggling to ensure that poor women are adequately researched and that their voice be heard. African feminists who are attempting to act upon these principles have organized in several countries: the Tanzanian Women's Research and Documentation Project (WRDP) is one such egalitarian organization; the Women's Action Group (WAG) in Zimbabwe is another. Women in Nigeria (WIN) is attempting to come to grips with class issues; so far there is no feminist research group with these kinds of concerns in Kenya. The difficulty for such groups is that their approach challenges the very structure of society upon which development assumptions are based.

The approach favoured, therefore, by most African feminist researchers, is the liberal project of integration of women into the existing structure of society. This is the direction of most of the work being carried out by the other regional organization for research on women, the African Training and Research Centre for Women (ATRCW), which is part of the United Nations Economic Commission for Africa (UNECA), based in Addis Ababa, Ethiopia (see ATRCW, 1985a; 1985b; ECA, 1977 documents the origin and growth of ATRCW). Almost entirely funded by external donors, ATRCW follows the WID ideology

developed by western donor agencies. As Mbilinyi says, "the integration line is exceedingly powerful, and arose as a result of what were progressive demands for human equality directed towards women's lack of full equality internationally and in Africa" (1984: 292). Yet the liberal approach, whether promulgated by African feminists or western researchers, has limited explanatory power regarding the dialectical relation between technology transfer and African family and community. For example, ATRCW is preoccupied with social indicators as a means of understanding women's situation (see its [1985a] survey and support of UN efforts to compile social indicators). While such a preoccupation is useful in ensuring good methodology in the collection of necessary data, it excludes, by the way it constructs the subject of research, dynamic and historically grounded questions about the relation between changing sex-gender systems and the "situation of women". It also provides no space for considering the contribution of women's organizations to the maintenance and enhancement of the "situation of women".

The value of AAWORD's contribution, in particular, should not be discounted, however. It is providing political legitimation for indigenous research, and is prompting a more careful attitude among western researchers. As well, it is providing a conduit for agency initiatives that place priority on African involvement. For example, the AAWORD Newsletter (1985) advertised the Rockefeller Foundation's programme to explore "long term implications of changing gender roles" through funding projects that "address the social, psychological, political and economic phenomena associated with the rapidly changing status of women" (AAWORD, 1985: 15).

A further category of research/action that should be discussed is the large cluster of non-governmental organizations (NGOs) that have concerned themselves with women in development. In that they are organizations with specialized purposes, such as family planning, education, religious association and so on, their goals are more modest and their conceptualization of development issues often closer to grassroots concerns. Most are defined by altruistic aims of one kind or another, and frequently these aims are compatible with feminist political economy concerns. Usually short of financial resources, they have not been able to fund large scale involvement of western 'experts', and have perforce relied on fostering human resources in the developing country. In many cases, these resources have been female. NGOs' chief liability, lack of funding, is also their strength: they are not constrained by powerful national policy directions in the way that both bilateral and multilateral aid agencies are.

In recent years, particularly in the lead-up to the Nairobi Forum '85, the conference of non-governmental organizations held concurrently with the United Nations End-of-Decade Conference, there has been a proliferation of women's NGOs throughout the Third World, dealing with every aspect of women's lives and struggle (see Canadian Woman Studies/les cahiers de la femme 7[1&2], 1986, "Post Nairobi" -- special double issue on the Forum -- for an excellent overview of these organizations and the experience of the conference). Exemplary of western organizations addressing themselves in a concrete way to issues of technology and gender is the Equity Policy Center, whose symposium on women and health is cited above. Providing a vital communications service to the Third World is Geneva-based ISIS Womens International Information and

Communication Service. It was established as a non-profit organization in 1974 in response to "demands from women in many countries for an organisation to facilitate global communication among women and to gather and distribute internationally materials and information produced by women and women's groups." By 1983 it had a network of 10,000 contacts in 130 countries, and a resource library of 50,000 items from books to films; it offered a variety of services, including training in communication, and conference organization (ISIS 1983: 221-22). Its resource guide book (1983), intended as an action tool for Third World feminists involved in WID efforts, addresses in a brief, commonsensical way many of the issues raised in chapter 3 and throughout the monograph, such as the invisibility of women's knowledge, the problems with the 'income generation' approach, and the undermining of women's rights and economic control by development projects.

In Canada, the Canadian Council for International Cooperation (CCIC) has provided an umbrella organization for a wide range of Canadian and Third World organizations. The CCIC performs a valuable service in bringing together grassroots women leaders (for example at the Nairobi Forum -- see Gascon [1986] for an account of CCIC workshops). Commonly, it is elite wives of male leaders who attend international conferences (including the UN Women's Decade conferences); there are severe financial, political and logistical barriers to interaction between Third World non-elite feminist leaders.

In the Third World, the DAWN group (see DAWN, 1986) is a project that began as an international feminist initiative in Bangalore, India, in 1984. Founded as an umbrella organization to improve links between women's organizations within the Third World, DAWN was a vigorous presence at the Nairobi Forum. The group, with which AAWORD and other regional associations have affiliated themselves, promises to provide a powerful Third World feminist voice (one can anticipate that it will not have access to funds or resources on a scale comparable to ISIS and CCIC, however).

The conceptualization of gender, technology and development in academic scholarship forms part of the enquiry in Part II of this study, which reviews the major research findings. Once again, the feminist frameworks delineated above will provide guidelines for thinking about the explanatory value of different studies. As mentioned, the great majority of academic studies on technology and gender are conceived within the liberal feminist framework. In the focus on the individual and the lack of in-depth analysis of social process and structure that characterizes this approach, they can only describe problems relating to technology transfer; on the whole, they are unable to explain, and hence provide guidelines for solving, problems that emerge from the dialectical interaction between gender, community and technology. Many of these studies are reviewed for the valuable data they provide, and for their identification of problem areas to be researched further. A consensus has emerged in the literature on a series of issues regarding technology transfer and gender in the local community: chapter 3 presents and illustrates these issues. It is feminist political economy, however, that provides the explanations of sex-gender systems and processes of change that are necessary for generating appropriate solutions: chapter 4 therefore develops a case study and presents synopses of two works by African scholars to demonstrate the value of this approach.

PART II

**TECHNOLOGY TRANSFER: GENDER AND
POWER IN THE VILLAGE AND FAMILY**

CHAPTER 3

TECHNOLOGY, GENDER AND DEVELOPMENT IN AFRICA: THE FINDINGS

Scholars researching women, technology and development have identified a common set of problems throughout the Third World regarding technology-related development efforts. Africa shares these problems, although its particular sex-gender systems and historical experience create unique technology transfer problems for the continent. As I have indicated, however, the studies of the problem, whether conceived globally or regionally, are richer in description than in explanation. It is in the realm of feminist political economy that we must seek an understanding of African gender relations, and of social change in the village and family. Feminist political economy has not addressed itself directly to problems of technology transfer to any great degree, however; thus a rigorous understanding of technology, development and gender must be sought in the synthesis of these two areas of enquiry.

Part II of the study is therefore divided into two chapters. Chapter 3 deals with the women and technology literature, and with technology-related components of WID literature, drawing on case studies from Kenya, Nigeria and elsewhere. Chapter 4 focusses on the findings of feminist political economy, using an extended Kenyan case study and synopses of research by two African scholars to demonstrate the explanatory power of the framework. Chapter 5 in Part III, discusses the synthesis of the two areas as an interrelation that has not been addressed in previous research. The aim throughout is to elucidate the dialectical relation between technology and local community. Inevitably in this investigation, however, national and regional level organizations must be considered (as in the case of Zambia's development corporation, INDECO, discussed in relation to bread manufacture policy in section B below), given that state policy impinges directly upon choices made at the village level.

A. African Women and Technology: Dependency and Disadvantage

Writers on women and technology share with scholars working on women in development generally the view that women are caught in a nexus of political dependency (see for example Charlton, 1984; Ahmed, 1985; ILO, 1984; Nelson, 1981; Dauber and Cain, 1981). The concepts from dependency theory inform this writing to some degree, although the full implications of the dependency framework are usually not explored. In some studies, the structural dimensions of the analysis are undermined by a reductionist tendency, borrowed from radical feminism, to treat men as a unitary category responsible for women's oppression. Further, most of this work shares the major flaw of dependency theory: its rather static, ahistorical conceptualization of the dependent societies, in which nations and individuals are seen as passive recipients of exploitative capitalist structures and practices. In the dependency framework, therefore, neither the complexities of indigenous political economy -- including class formation, nor the agency of local communities, can be adequately understood. Specifically, the influence of community organizations upon the introduction and sustained use of technology

remains largely invisible in the literature. While many studies call for more community involvement, especially of women's groups, they rarely explore the historical basis upon which such involvement could be built.

Nevertheless, the dependency approach applied to women and technology sets a useful descriptive context. Charlton's conceptualization of the powerlessness of women regarding development decisions (1984: 23-28) exemplifies this utility. She sees women as being caught in a "triad of dependency," whereby

in virtually every country in the world... women are dependent upon men in formal politics at the local, national, and international levels. Equally important in this conceptualization is the recognition that these three levels are increasingly interrelated. Events at the local level, whether in the private (family/kingroup) sphere or public sphere are more and more influenced by the institutions of the national state. Moreover, the expansion of multinational organizations means that virtually no country can be considered impermeable to influences that originate outside its border....The choice by a village woman to breast-feed her infant is conditioned in part by forces over which she has no control: the availability of manufactured formulas, advertising and other sources of information (such as health workers), prices and cash income, and government policies regulating the operations of multinational corporations....The conditions of a woman's life -- even in remote villages -- are influenced by institutions and events that are physically far removed from her....Whatever their traditional condition, women in general have little or no formal, institutionalized power at the local, national, and international levels in comparison to men. Even when [women] do acquire public influence locally or nationally, that influence is often undermined by the limited autonomy of their nation-state (24-25).

Women's powerlessness to choose has special import with regard to technology transfers, which impinge so dramatically upon their lives. As a number of writers, including Cain (1981: 5-6), point out, the people responsible for technology choices are usually those least affected by them, while those most affected, who must adapt to or live with the choices, have the least say about them. To make matters worse, this contradiction has scarcely been recognized, let alone addressed, in any quarter.

Women's lack of choice, and the invisibility of this powerlessness, take on concrete significance in the context of Africa's dependence on women as food producers.¹ Agricultural technology has had the most profound negative

¹ Lewis (1984: 170) summarizes this role: "African women are usually the primary food producers in the countryside. Rural women typically work two to six hours per day longer than rural men. On the average in African societies, women put in 70 percent of all the time expended on food production, 100 percent of the time spent on food processing, 50 percent of that spent on food storage and animal husbandry, 60 percent of all the marketing, 90 percent of all beer

impact, not only upon women's ability to maintain their responsibilities as food producers, but upon their position within the village and family. Inherent in much of the earlier policy from which agricultural technology flowed were what Tinker (1981: 52-53) describes as "irrational stereotypes of appropriate roles for women." According to these stereotypes, which are reenforced by inappropriate definitions of economic activity, "women don't 'work', or if they do, they shouldn't. Thus a draft of an AID agricultural policy paper done in 1977 could suggest that a measure of development would be reducing the number of women working in the fields."

There are serious consequences to such thinking. African women's role in production is ignored because it does not fit into existing economic models. Because women's choices regarding their economic activities have been so drastically curtailed, allocation of their labour time is not seen as rational, when measured by the criteria of western economic theory (this theory assumes that individuals allocate their labour time, as they allocate their resources, according to marginal utility, i.e. according to rational choices that maximize return). As a consequence of being considered economically anomalous, women's farm labour has not been computed as measurable economic activity. It was thus possible for the US Department of Agriculture (USDA, 1981) to make the suggestion that labour is the major 'scarce' resource in African food production, on the basis of a survey of male labour in African farming.

Henn (1983) points out the absurdity of this assertion, citing data for Tanzanian and Cameroonian women that are probably fairly typical for Africa as a whole: while Beti men in Cameroon spent 220 hours a year on food tasks, and Haya men in Tanzania 450, Beti and Haya women spent 1250 and over 1000 hours a year respectively producing food (an average of four to five hours a day compared to men's one or two). In the light of this, "it is ludicrous to suggest that all labour will remain scarce in the food sector until the gap between urban wages and [economic return] on food production is closed" (Henn, 1983: 1047-48). Yet it is precisely on assertions such as the USDA's that the World Bank policy on correcting rural-urban bias cited in chapter 2 is based (removal of food price controls to close the gap between urban and rural income is an important component of this policy). The focus on labour to the exclusion of other resource scarcities renders invisible the real scarcities in African food production: material and financial inputs to the major producers. Women's role as primary producers, unequal access to inputs, and the inequitable distribution of food crop income within the family, go unaddressed in conventional western economic thinking. Yet almost all the studies reveal that increased farm income is appropriated by men and put to uses that do not benefit women and children, while the production involved in generating such income falls largely to women, seriously increasing their workloads and reducing their ability to produce food for the family.

It is not surprising that women have different perceptions of development than men, given that their access to the new options presented are different.

brewing, 90 percent of time spent obtaining water supply and 80 percent of time spent to obtain the fuel supply."

Nelson (1984: 4-6) and others describe the increasing gender conflict in the context of development processes,² and "attribute the situation to women's unequal share of the new options or society's resentment when one group of women (as in the case of the Zambian nurses³) has co-opted a large enough share to threaten the balance of power in gender relations." Agricultural development projects have created a principal arena of gender conflict. Dey (1981: 109-122) discusses the deep rivalries between women and men that emerged in the context of a Gambian wet rice scheme. The Chinese engineers who designed the project misunderstood the division of labour, whereby women were traditionally responsible for wet rice cultivation, and women were consequently left out of the project design. These and other studies "underscore with depressing predictability the ways in which the new economic opportunities have been controlled and co-opted by men. African men (as elsewhere) have moved into a more advantageous position vis-à-vis women in their respective communities over the past century (Nelson, 1981: 5)."⁴

The loss of traditional rights and power in the village and family is a constant theme of the WID literature on Africa. As Bryceson (1985: 7-8) notes, however, there is surprisingly little material written specifically on the topic of women and technology, in contrast to the large amount of material on women and work (such as Robertson and Berger, 1986; Leacock and Safa, 1986; Hay and Stichter, 1984; Bay, 1982; Nelson, 1981). This material tends to analyse the relationship between women and technology in a cursory fashion. Nevertheless, both the general literature just cited, and the specific studies on technology transfer, describe clearly the complicity of new technology in the subversion of women's position. The following survey of key issues regarding technology and gender is gleaned from the few specific studies on women and technology, and from a disparate variety of studies that touch on the subject.⁵

² The evidence for this is overwhelming. Texts cited in the feminist political economy section below almost all document the phenomenon.

³ Nurses, according to Schuster (1981: 77-97) were drawn into radically different gender relations as a result of their high profile role as healers in a western system of hospital nursing. This system did not take account of social problems arising from conflicting indigenous and western healing principles, and as a consequence, the nurses became scapegoats for hospital problems, as well as for disruptions in gender relations in Zambian society generally.

⁴ But see Stamp (1986: 42) on the point that such privileging of men within the sex-gender system contributes to the inequitable political economy that disadvantages both men and women as peasants. The many ways in which men have lost out as well, since mercantile and colonial times, are beyond the scope of analysis in this study, however.

⁵ Bryceson's (1985: 37-44) bibliography provides the most recent overview of the relevant literature; this bibliography is recommended in that a number of the studies, including many of the

Bryceson's lucid definition of technology serves to summarize the meaning usually given to the term in the women and technology literature. In its wider sense, technology is the:

Objects, techniques, skills and processes which facilitate human activity in terms of: first reducing human energy expenditure, second, reducing labour time, third, improving spatial mobility and fourth, alleviating material uncertainty....[These] objects, techniques and processes...have arisen from the application of human understanding and knowledge of matter and...serve to enhance human capabilities. 'Human capabilities' denote not only an individual's physical and mental capacities but also the social freedom for pursuing one's capacities (Bryceson, 1985: 8-9).

This definition takes a useful step away from the notion of technology as artefact, towards an understanding of technology as social construct (I would add to the definition of 'human capabilities' the community's capacity to fulfill its members social and physical needs). The definition delineates, however, what technology is supposed to accomplish, and optimally does accomplish, rather than what is actually achieved in the process of technology transfer from the western world to Africa.

In exploring the realities of this process at the local level, whereby technology's purpose is subverted, I identify ten issues in the literature around which a degree of consensus has emerged:

- 1) The treatment of technology by African governments and by development agencies as a neutral, value free tool, which renders the problems cited above invisible. Development will inevitably flow from a technological 'fix' in this erroneous view.
- 2) Sexist bias in African governmental policies, whereby development planning and implementation is structured in such a way that even such insights as have been garnered regarding women and technology are ignored.
- 3) The question of 'appropriate technology': who has decided what is 'appropriate', and whose interests does it serve?
- 4) The question of 'income generation': the focus on projects pushing women to make objects for sale trivializes their main work as food producers on the one hand, and reinforces the 'home economics' stereotype of appropriate women's 'activity' on the other hand. Further, market considerations are often not considered when craft production is encouraged.
- 5) The focus on women as 'welfare' subjects, i.e. as recipients of social service projects, rather than as active agents in development. Once again, their centrality to African economy is overlooked by this

UN publications, have not been included here.

approach. Further, the 'target group' approach assumes that there are systematic links through which resources can be channeled to women: an erroneous assumption (see Hyden, 1986: 63, although he does not make the point in connection with women).

- 6) Women's unequal access to development resources, particularly sources of capital formation and credit.
- 7) Women's loss of legal rights, and of political, economic and social autonomy within the community. Loss of rights in land is a particularly severe dimension of these phenomena.
- 8) The disruption of gender relations, whereby traditional tendencies to male domination are substantially enhanced, while women's counterbalancing power within the family has been undermined. As a consequence, African women experience a greater degree of subordination to their husbands, and a loss to their husbands of control over their own labour. An outcome of this is often resistance on the part of women to innovations they perceive, quite rightly, as contributing to their loss of power and economic control.
- 9) The intensification of women's labour as a consequence of new agriculture and health technologies, coupled with a loss of decision-making power in the realm of production, health and nutrition.
- 10) The positive consequences for technology transfer and sustenance when women are central decision-makers in the process. Women's decision-making power is predicated upon the existence of effective grassroots women's organizations.

These ten issues are inextricably intertwined in the experience of African women and African communities. The first five issues, dealt with in section B below, relate to the politics of aid, development ideology, gender bias in policy, and misguided conceptualizations of the problem. The next four issues, treated collectively in section C., bear intimately upon the relation between new technology and changing political economy in Africa, both national and local. In particular, issues 6 to 9 bear on the relation between technology and sex-gender systems (More detailed analysis of the transformation of gender relations, which are the background to these technology and development issues, is given in the chapter on feminist political economy below). General statements are made about issues 1 to 5, supported by examples from the literature. Issues 6 to 9 are explored through several exemplary case studies. The last issue, considered in section D., remains largely in the realm of potential, and should be the primary focus of future research and policy.

B. The Politics of Technology and Gender: Five Issues

Issue 1. The technological 'fix'

The inherent difficulties in a conceptualization of technology as

artefact have already been alluded to. Anderson (1985: 59) summarizes the problem for women in development succinctly:

The basic assumption persists that technical solutions can be found for any problem. Efforts to develop Science Policy Institutes in many developing countries, to negotiate systems for the equitable transfer of technical knowledge, to develop international journals for the publication and dissemination of discoveries -- even the appropriate technology movement -- all rest on the assumption that a technological "fix" may be found. If we can only get the technology "right," then the assumption is that progress and development in the Third World will be inevitable. Many advocates of women's involvement in development are now searching for the "right" technologies for women to assure their participation in and benefit from development. [Behind this is the belief] that science and technology, because based in nature, are separate from all normative and political influence and free from cultural or class bias. In fact, there is evidence to the contrary. Among scientists there is an increasing acknowledgement of the interactions of their discoveries and knowledge with their social experience.

Anderson stresses the importance of acknowledging the power of these hidden assumptions, and of exploring the link between "access to and control of" knowledge and the effective application of technologies in development." A major consequence of the view of technology as a neutral tool is that technology transfer efforts, with relatively few exceptions, have carried with them a Trojan Horse of western economic ideology: development means increased productivity through large scale, capital-intensive enterprise (or at least through intensive commercialization of small scale farming) according to the unexamined tenets of this ideology.

Thus, as Palmer and many others have pointed out (Palmer, 1978; and for example, Sharma, 1973), the high yielding variety (HYV) technology of the Green Revolution, seen as a miraculous solution to Third World food problems, has had a serious impact, not only in terms of less equitable gender relations, but in terms of growing class divisions as well, as land becomes concentrated in the hands of those land owners with prior advantage (such in access to credit, membership in the dominant ethnic or religious group),⁶ who are able to maximize that advantage in the use of the new technology. All aspects of crop production are affected by the new seeds and their accompanying technology. Thus, while there has been an overall increase in cereal yields, the burden of work has been considerably increased, and large categories of peasants have been rendered unable to continue food production, or have been forced to sell their land and work as labourers. Women have been particularly hard hit by the new agricultural technology. One can therefore

⁶ Glazier, in his study, Land and the Uses of Tradition Among the Mbeere of Kenya (1985), provides an excellent analysis of how an advantaged group manipulates tradition to formulate and legitimize a claim to an inequitable share of community resources.

question whether it is accurate to measure increased productivity simply by the gross statistics on crop yields.

An important conclusion to be drawn from analyses such as Palmer's (1978, cited in Whitehead, 1985: 30-36; see also Palmer, 1985), is that those technological changes having the most significant impact upon women are not usually aimed at women at all: large scale development projects and their attendant technology rarely include policy regarding women in their initial stages of planning. The problem does not lie chiefly with projects aimed at women (although these are indeed problematical as this review shows); rather, as Whitehead (1985: 32) points out, "for large numbers of rural women the most significant forms of technological change are more likely to be the indirect consequences of both planned and unplanned innovations in agriculture as a whole. In many cases, far-reaching effects on women's work derive from the powerful drive to commercialise the potentially profitable sectors of women's work."

In the context of Africa, the drive to commercialize has involved not only foodland, but non-farm productive activities that were the province of women as well. The consequence has been not only women's loss of income from production, but a dependency on sophisticated consumer goods, often imported or relying on imported inputs. This dependency not only creates debt problems for the country, but poses severe financial strains on the budgets of women, who are traditionally responsible for consumer items. Commodities removed from the realm of local, small scale production to factories include beer, cloth and clothing, bread, bricks, and cooking ware. Women were responsible for much of this production. "But urban-based planners and industrial ministries viewed production of pots, clothes-making, brick factories and modern bakeries as potential fields for government promotion of investment to spread modern technologies" (Seidman, 1981: 117). The industries did not involve much capital or skilled labour, and were thus attractive. Seidman records that:

The rural industries division of Zambia's parastatal development corporation, INDECO, for example, proclaimed that it was introducing 'modern' bakeries in small towns throughout the countryside. Little attention was paid to the fact that local bakers, many of them women, would no longer be able to sell their home-made produce in competition with these government sponsored concerns (117).

A similar story exists for Tanzania, where a massive bread factory was built in Dar es Salaam with Canadian funds. In agriculture in particular, the introduction of such technology as tractors has undermined women's economic position. In Tanzania, for example, tractors introduced into settlement schemes made possible dramatic expansion of the acreage cultivated; weeding, however, remained women's task, and they were unable to keep up with this work. As a result, yields fell substantially below that anticipated by planners (Fortmann, 1979).

Capital intensive technology is not always negative for women. In Western Cameroon, for example, corn mills bought by the Department of Education in the 1950s and loaned to villages continue to function today, to

the benefit of the women who run them and of the communities they serve (Wipper, 1984: 75-76, citing O'Kelly, 1973: 108-21). But it is only when, by coincidence or design, women collectively appropriate capital-intensive technology, that such success stories can be told. In other words, the miracle regarding technology lies not in its physical attributes, but in its enlightened application.

Issue 2. Sexist Bias in Policy

Although feminists are always hoping for something better, it is not surprising that sexist bias in policy making exists, given the cloistered men's club environment of policy-making. Mohammadi's (1984: 4) generalizations regarding the national planning process generally hold true for Africa (see Feldman, 1984 for a good analysis of Kenyan policies towards rural women):

With few exceptions, planning takes place in a small unit, dominated by economists, and in a large number of countries...by expatriates. These planners and their concepts of planning have little to do with the conditions of people in general. The decision making and policy formulation is dominated by the wishes of a small group in power, the process is influenced by powerful interest groups, more often than not, unaware or indifferent to a consideration of women as participants in planning, policies, and national strategies. Not only women, but the ordinary male citizen is also only a number in the work force. Secondly, a realistic look at the levels of decision making and the sex composition of people who occupy them would show that women can hardly have much influence on policy and planning decisions as the majority occupy lower echelons and are mere workers. Inequality of access to training, education, employment and also traditions have limited the number of trained women who could participate in planning (Mohammadi, 1984: 4).

This is the setting within which notions of technology as a neutral tool, as discussed above, are easily promulgated. However, it is also the setting where positions far removed from the needs and roles of women can be taken; in many cases, these positions could be assured of no challenge from men at the local level, feeding as they do into popular stereotypes and expectations of women. Particularly popular with governments (and with many aid agencies) is the 'technological fix' for women's overburdened workloads, which are seen as a major constraint upon development. A comment by a Tanzanian village leader gets to the heart of the matter:

RIDEP [the regional development agency] should help the women with water. Water is a big problem for women. We can sit here all day waiting for food because there is no woman at home. Always they are going to fetch water (Wily, 1981: 58, cited in Henn, 1983: 1049).

Similar assertions of male prerogative, supported by sexist bias, may be found in the more sophisticated guise of social science jargon. The following statement in recent book on social services in Nigeria by a geography professor at the University of Benin (Onokerhoraye, 1984: 156) exemplifies an attitude -- and language -- that categorizes women as minors and a 'problem'

in a way that would be unacceptable in Canada today. As well, it presents a stereotypical and erroneous view of Nigerian women's position and role in the past.

Women -- like children, the disabled and the aged -- represent a special group of people in Nigeria as in many other parts of the developing world. Consequently, they require certain personal welfare services to enhance their contribution to contemporary Nigerian society. The need for special services for women in Nigeria arises from their traditional subordinate economic and social status compared with that of men. Although, traditionally, the conception of the status and role of women varied slightly from one part of Nigeria to another depending on the customs, religion or culture, a woman's role was largely restricted to the home where she was expected to rear children while the men were the breadwinners. Although women in some localities were involved in farming, fishing, trading and the fetching of firewood, their primary function was to rear children.⁷

It is analyses such as these that inform contemporary Nigerian policy toward women, as the Women in Nigeria (WIN) organization affirms in its recent policy recommendation document (Women in Nigeria, 1985: 6-7):

Men remain dominant, wield and disburse power. Despite the crucial and basic contributions of women to the economy of the nation, their indispensable labour is unacknowledged, unpaid-for and poorly taken into account in national development plans....We hope [the policy recommendations of the WIN Document] will be received seriously and will not go the way of most recommendations which end up neglected, un-read, stacked up in file cabinets or on dusty floors....

Bryceson confirms the above insights through an analysis of the relation between the state, technology and women (1985: 24-28). In it, she reviews policies affecting women's relationship to production technology; policies affecting women's relationship to reproduction technology; policies affecting women's relationship to scientific exploration; and policies affecting women's relationship to destruction technology. She agrees with a number of writers that both western individualist ideology and traditional ethnic and religious notions serve to maintain women in a state of social dependency.

Bias in national policy presents one set of problems; another set exists at the level of field administration, as Staudt's extensive studies on agricultural policy implementation in Kenya reveal (1975-1976; 1978; 1985b). Her study in 1975, conducted in Kakamega District of Western Kenya, surveyed 212 small farms in terms of the impact of agricultural services. The services included visits from agricultural instructors, loans, and training, and were structured by an agricultural development policy that included among its objectives the provision of technology "on an equitable basis" (1985b: xi).

⁷ Onokerhoraye's statement is all the more extraordinary when it is considered that the source he cites for it is a national conference on rural development and women held in Benin in 1980 (Afejuku, 1980).

She found that those farms jointly managed by a man, as opposed to female-managed farms of the same size, received a much higher level of service in the form of visits and training, while women-managed farms received no loans at all.

She attributes this inequity to "prejudicial attitudes and ideological bias" (1985b: 37) institutionalized in a system where "men dominate administrative offices and political authority networks which provide contacts and information about valuable agricultural services" (1985b: xi). Women's exclusion from cooperatives, or discrimination within cooperatives against women members, was one of the most serious aspects of this dual ideological and institutional bias against women, hampering their ability to develop their farming practices, or adopt improved technology. Cooperatives were important sources of soft loans for maize seed and fertilizer as well as of tractor services and high grade cows. Staudt's findings regarding access to the latter demonstrates women's disadvantage in this respect:

Given the high value of a grade cow and the committee selection process used to determine eligibility for the cow loan, the potential for discrimination was high, be it political, economic or gender-based. Not enough cows were available for the entire membership. Influence and contacts were thus essential for pressing or "reminding" committee members of an application. This is generally considered men's activity, particularly because it is largely men who sit on the committee.*

Thus, even though almost all the women belonged to organizational networks providing mutual aid and shared labour, they had no means of countering the bias that dominated local policy-making and implementation. According to her findings, sexist bias was the most important factor explaining the inability of women to take advantage of new knowledge and technology. Her interviews with agricultural instructors recorded negative comments about women farmers; further, they revealed that the instructors were avoiding women on customary grounds, where speaking directly to women was considered incorrect. The preference of agricultural staff for speaking with men is articulated in this comment by an interviewee:

In the African way, we speak to the man who is the head of the house and assume he will pass on the information to other household members. Being men, of course, it is easier for us to persuade men (Staudt, 1985b: 37).

There is a disingenuous quality to the pleading of customary propriety by agricultural instructors. The political economy evidence in chapter 4 reveals that 'household', 'head of household' and men's authority over women were not as clearcut conceptually as they appear in today's stereotypes. As with the notion of 'breadwinners' cited above, 'head of household' as a characterization of men in traditional African families has a distinctly

* Kenya has an advanced artificial insemination programme, and cross-breeding of European dairy cattle with hardy indigenous stock has been a major means of increasing milk yield. One 'grade cow' may make a substantial difference to family nutrition.

imported flavour.* Indeed, it is a western vision of family, and of its spatial disposition, that has informed a particularly crucial area of development technology: that of housing construction. In Tanzania, during the 'villagisation' campaign of the mid-1970s, men were encouraged to build western-style houses in the new collective villages (Caplan, 1981: 106-107). A district official called the men in one village and told them:

Let there be one house, and let that house be built according to the family that you have....To build one small hut here, and another over there in a corner, that is not a good way to lay out a village....We want everyone to have proper houses. So try to get corrugated iron for the roof, and cement floors. If you can't manage all at once, buy a little at a time. We don't want people living any more in houses which are full of snakes and mice (106).

Among the many problems Caplan identifies in this speech, one of the most serious is the lack of recognition of the complexity of the African family, whereby women's autonomy is very practically rooted in her right to her own dwelling. Complex and shifting family responsibilities cannot be encompassed within the four square walls of a western house. No provision is made for the widow, the polygynous family, the young couple. Caplan points out that the speech referred to the men as "You and your families". Yet:

In Swahili, the term 'family', in the sense of a bounded domestic group does not exist. Indeed, it has been necessary to take the English term and turn it into a Swahili form 'familia'. Such a linguistic usage contains a number of premises -- that the unit in society is 'a man and his family', and that this unit requires a house and an area of land. In other words, concepts foreign to this society, of closely bounded units in the form of households, possessing property in the form of a house and land, and headed by a male, are being introduced. If this becomes a reality, then women, along with old people, will have lost much of their autonomy (107).

Along the same lines, a poignant illustration of the linguistic subversion of African sex-gender systems is to be found in the dedication of a classic medical text, that was the 'bible' for African health care workers for a generation. Maurice King dedicated his Medical Care in Developing Countries (1966) "...to the common man and his family in developing countries everywhere."

A final, concrete example of policy bias at the level of the village is a case from the Sahel involving a matter not simply development of resources, but survival itself. An American solar technician promoting the use of solar

* I am not arguing that men were not dominant in pre-colonial society. Rather, authority and 'family' did not have coterminous boundaries. Relations between fathers and sons, between brothers, between co-wives and their husband, between sisters and brothers, all rendered the question of assigning an individual the status of 'head of household' very problematical.

water pumps gave demonstrations to male village leaders only, claiming that women would not understand them. Given the gender division of labour, whereby men rarely if ever may be involved in water procurement, the demonstration was thus received by members of the community who were in no position to put their new knowledge to use, or to evaluate the appropriateness of the technology for the task (Hoskins and Weber, 1985: 6).

Issue 3. Appropriate Technology

Once the negative impact of capital-intensive technology began to be recognized, a new approach was adopted by agencies and governments as the basis for development programmes. According to usual definitions of the term, appropriate technology is that which is the most effective and acceptable in any given social, economic and ecological context. The notion of 'appropriate technology' is therefore a relative one, as well as being subjective, i.e. susceptible to the judgement of the users (this is, of course, desirable; unfortunately, it is also susceptible to the subjective judgement of the providers).

The concept would appear to be an admirable one, in that it takes account of technology as social process. Indeed, its appeal is such that its celebration in an exhibition held in Nairobi during the Forum'85 Conference, "Tech & Tools: An Appropriate Technology Event for Women" was one of the most popular features of the Forum. The objectives, as stated in brochure (Tech & Tools, 1985: 1) are "strategies to increase women's access to, use of, and control of technologies in agriculture, food processing, health, energy, communications and income-generation." Displayed at the exhibition, with accompanying brochures including blueprints for manufacture, were a number of devices (including a series promoted by UNICEF) such as the Umeme energy-efficient charcoal stove; the oil drum bread oven and the bamboo-reinforced water tank for collecting rainwater from the roof.

There is no question but that appropriate technology is an improvement over earlier approaches. However, evaluations of appropriate technology programmes reveal that a large number of projects do not achieve their objective of improving women's lives in any significant manner. Further, if a criterion of success is the spread of the technology beyond the original recipients, then the record is even bleaker. What has gone wrong? Once again, value judgments by development planners, and lack of account of social and economic impact, have undermined the movement's effectiveness. As Bryceson says, "there is a wide array of technological devices that could reduce women's labour intensive activities in transformation work [i.e. 'domestic labour'] e.g. for food processing: grinders, graters, oil extractors, improved stoves, solar cookers, low cost refrigeration; for water supplies: pumps; for transport: handcarts, wheelbarrows, etc. Often these 'appropriate technologies' have met with less-than-hoped-for success because of limited dissemination, limited access or poor design" (1985: 11).

Part of the problem is a lack of clarity as to what is 'appropriate'. The thinking of Ventura-Dias (1985: 194-196) is a case in point. In discussing the question of appropriate technology in the context of Kenya, she distinguishes between the concept of 'improved' village technology and

'appropriate technology.' The former is a conservative notion, she argues, because it does not intend to introduce changes in the environment or the social or cultural order. Instead, it should "provide a solution to a felt need, should depend predominantly on locally available skills and materials, should be affordable and culturally and socially acceptable to the community" (UNICEF, 1980: 7). An improved technology could also be one which allows a traditional task to be performed better, or which enhances the use of existing technology.

Ventura-Dias argues, however, that such village technology cannot be considered 'appropriate', because it does not reorganize production to increase output, or to increase the competitiveness of the producer in the market. What is important is that 'appropriate technology' be supportive of women's ability to produce for the market, and to obtain credit and technical assistance. Her analysis is intended as an advocacy of women's empowerment vis-à-vis technology, and her argument has valuable points, including a critique of the limitations of the 'project approach' and an insistence that production as opposed to consumption be highlighted.¹⁰ Her argument has problems, however. Her use of a distinction between a conservative 'improved technology' concept and a more modern 'appropriate technology' concept, reveals the flaws in much of the thinking about appropriate technology. First, it has not escaped the economic bias of earlier approaches: it assumes that non-economic benefits (such as improved health) will flow inevitably from improved market position and from activities that further integrate village economies into the world market; furthermore the traditional/modern dichotomy is implicit in the denigration of customary village technology management.

Second, it repeats the error of discounting the importance of collective village involvement in the technology transfer process. As a result, once again, women are passive and problematic recipients of 'inappropriate' technology, a situation that can be fixed by providing them individually, within the Household Unit of Production (HUP) with the means of improving their lot. In this case, an improved lot is equated with an improved ability to produce for, and improved access to, the market. Ventura-Dias's basic premise is that "the problem of rural women in Kenya is...one of level of income and physical assets" (157). According to her, it is through analysis of the "specific characteristics of the HUP and its insertion in the market economy" (196) that an understanding of appropriate technology transfer can be generated. An additional flaw in this thinking, the assumption of a unitary, bounded category, 'the household', has been referred to in the summary above of Caplan's thoughts about the concept of 'family' in the context of Tanzania. The 'family' is one of the problematical concepts requiring evaluation that is cited in chapter 5.

¹⁰ Other writers argue this point as well: too much appropriate technology has been directed at the consumption aspect of women's work, in line with the ideology of woman as housewife, rather than at women's productive role (Hoskins and Weber, 1985: 6).

Why appropriate technology programmes have not worked must be sought in factors additional to women's low productivity and lack of access. Hoskins and Weber give the clue to the problem:

Introducing appropriate technologies is not new. Groups throughout the ages have shared or copied others' technologies when they found them appropriate. On the other hand, some groups living next to each other for centuries, in what appear to be similar situations, have rejected the others' tools, materials and techniques (1985: 6)

This statement implies that societies through history have had valid grounds -- cultural or environmental -- for rejecting technologies available to them. If we start from the reasonable assumption that women are refusing to accept or sustain appropriate technology on sound grounds, rather than out of 'backwardness' or 'ignorance', we can begin to see the problems with the appropriate technology movement, as applied in many cases. Who controls the technology would be the first issue to enter the mind of an African woman. In many projects, technology introduced for the benefit of women has been co-opted by men for their own use. For example, where women have been given carts to carry water and firewood, the carts have often been put to other uses by men (Hoskins and Weber, 1985:6).

There are other issues relating to acceptance of the technology. One is that the quality of the product may be compromised; another is that traditional technological processes may be lost. A third is the question of propriety: some equipment requires women to assume immodest body postures, for example. A fourth is the effect of the technology upon work patterns: solar pumps restrict water lifting to daylight hours, for example. A fifth involves the expenditure of energy: certain water pumps are tiring to use, requiring foot pumping, an unfamiliar and awkward muscular activity. A final and particularly important issue is the fact that some technology requires a level of organization for specialized tasks that does not exist in the community. The collective maintenance of community property such as well pulleys is an example of this; governments rarely budget for such maintenance.

The experience of a Nigerian community with new technology in the form of a hydraulic palm-oil press, reported by Charlton (1984), demonstrates the above issues, and makes the point that "to be fully appropriate, a technology should ideally grow from within a society and reflect local choices" (86).

For generations, the extraction of oil-palm fruits, a time and energy consuming task, has been done by women in some Nigerian communities. When a hydraulic oil press was to be introduced in one community, the village, a piece of land was allocated by the village head. When the oil press had been installed, 72 percent of the people used it, but after a year the figure dropped to 24 percent. Although they knew about the benefits, they withdrew from the use of the oil press for several reasons -- the by-products of the pressing pit were lost, i.e., the fibre was used as a source of heat; the daily time schedule for using the oil press did not coincide with that of the women; the size of the mortar was designed for men and women could only use it with an increased labour force; during peak season, the women had to wait for the use of the

press; all oil from it belonged to the men, and the women did not benefit from the increase of oil per unit of fruit processed (Janelid, 1975, cited in Charlton, 1984: 85-86).

Improved stoves are one of the most popular artefacts of the appropriate technology movement. While valuable in many situations, they have created a host of unforeseen problems, however, and have been accepted only slowly and unevenly. Many are not suited for local cuisine; or do not fit the local cook ware; or require women to cook and serve food in daylight, as there is no longer firelight to see by; or require purchase in many cases of expensive charcoal in places where gathering of free fuel is still possible as an alternative (only in areas where fuel is habitually purchased, such as in towns, is there large scale reliance on such stoves). Hoskyns and Weber (1985: 8) identify the most common complaints by women about their new stoves. What they have lost are

Smoke for chasing insects or waterproofing roofs,...a centre for conversation and a symbolic focus for the household. The three stones offer the benefit of flexibility of being moved due to the weather, etc., and of cooking with pots of various sizes. There are technical solutions to some of these losses, if women have carefully identified and project officials have listened to the real uses and benefits of traditional cooking fires.

Finally, some stove projects fail because they do not take account of polygynous households. Replacing the traditional three-stone fireplace in each hut with a single stove for the 'family' raises the question of where to locate the stove, and how to allocate cooking time upon it. Given that separate hearths materially structure polygynous marriages, the promotion of technology that undermines this practice is bound to fail, or worse, seriously to disrupt the marriage institution.

The Kenyan poet Okot p'Bitek's diatribe against stoves from the Song of Ocol says much:

I really hate the charcoal stove!
Your hand is always dirty
And anything you touch is blackened...
I am terribly afraid
Of the white man's stove
And I do not like using it
Because you stand up
When you cook
Who ever cooked standing up?
You use the saucepan and the frying pan
And other flat bottomed things
Because the stoves are flat
Like the face of a drum
The earthen vegetable pot
Cannot sit on it
There are no stones
On which to place

The pot for making millet bread....

Discussion at the 1981 "Rural Development and Women in Africa" Seminar held in Dakar, Senegal (ILO, 1984: 22-23) was sharp in its criticism of appropriate technology:

Appropriate for whom? Who exactly benefits from this 'appropriate technology' and why is it now felt that Africa needs appropriate technology? Given the fact that the ideology behind what is appropriate for Africa as well as the original design and parts would be brought from external sources, what is the implication for the balance of payments?What may seem cheap to an urban male official may be impossibly expensive to a poor rural woman given her very limited access to resources. This was particularly true when the work to be assisted does not yield any income....The assumption that rural women do not accept or are slow to accept innovation is a false assumption generated by an ideology of disdain for rural people; and it is a concrete symptom of blaming the victim. Given the precarious nature and economic insecurity of the rural poor, women are cautious rather than backward. Once convinced of the usefulness of a given innovation, rural women not only accept it but have often adapted and improved the technique.

For a useful brief overview of the "theory, practice and policy" of technologies appropriate for women, see Carr (1981).

Issue 4. Income Generation

Like appropriate technology, income generation became a pet concept of WID policy. Resting on the same assumption underlying the appropriate technology initiative described above -- that improved incomes for women were the answer to women's exclusion from development -- income generation schemes encouraged women to invest their productive energy in making articles for sale, providing them with technological know-how and (sometimes) the equipment to do so. For an indication of the popularity of income generation schemes in Kenya, see the list of activities and organizational goals presented in the Mazangira Institute (1985) guide. As Ventura-Dias (1985: 202-204) points out, however, a major reason for the popularity of the schemes in Kenya is that they do not challenge conventional ideology about the sexual division of labour. Women's 'productivity' would be enhanced, without challenging the prerogatives of men in the sphere of commercial enterprise. Bryson (1981: 44) noted that "it is important to avoid presenting [income generation schemes] as commercial programmes as that would defeat their purpose, i.e. 'cash' crops are male crops and men would be more likely to take over such programmes" (cited in Ventura-Dias, 1985: 203).

Central to the concept of income generation, therefore, is the notion that this is a 'female' project which is ancillary to the main business of the nation. The approach is not that different from the view that western women work for 'pin money' rather than for a serious wage. Skills training, in sewing for example, can be viewed as an aspect of women's 'domestic' role. The consequence for African women is that they are discouraged from viewing themselves as competent individuals making an economic contribution to

national production. To make matters worse, the presence of a long term, stable market for the articles they are prompted to make (for example, by the World Bank [1979]), and the existence of an adequate transportation and marketing infrastructure, are rarely considered. The danger of assistance agencies giving grants to set up non-competitive industries has been documented: the industry often fails once the grant runs out -- reinforcing the prejudice that women are economically incompetent (Tinker, 1981: 78). Further, inadequate coordination leads to contradictions in development policy, whereby the left hand may not know what the right is doing: in Upper Volta, for example, the increased production of millet beer, encouraged by income-generating schemes subsidized by government, was jeopardized by the new Heineken beer factory -- also subsidized by government (Tinker, 1981: 78).

The Zambian Association for Research and Development (ZARD) duplicates Kenya's experience with income generation schemes. ZARD (1986:82-84) notes the shift in government and local district councils from a bias in favour of home economics instruction for women, to an emphasis upon training for income generation. Among the many projects started was the George Weaving Group in Lusaka, sponsored by the YWCA. For the ZARD scholars, the new approach shares many of the flaws of the home economics approach. Even though a number of women have benefitted from the scheme, the majority of poor women have other, more important basic needs. Once again, women's own priorities and needs have not been researched. Moreover, ZARD points out the assumption of the approach that women's most basic need is for income. The arithmetic view of development, as I indicated above, seriously limits understanding of the structural social processes that must be implicated if successful development is to occur.

Another flaw of the schemes is that they do not take account of capital purchases necessary to pursue the craft trained for, such as a sewing machine. Neither do they provide training in setting up a production unit, or in how to obtain credit. For the few who do manage to find work, whether on a piece basis or in employment, long hours and sub-minimum wages are the norm. Meanwhile, Zambian governmental policy has paid little attention women's main occupation: agricultural production. A further omission is lack of recognition of the increased burden placed upon women. Ironically, income-generating schemes, designed to reduce women's drudgery by generating cash with which to buy goods and services they formerly produced, have increased the drudgery by adding the income-generation labour to traditional subsistence tasks. The meagre earnings from craft production are rarely adequate to purchase expensive food and services -- usually from men -- in the market place (see also Ventura-Dias, 1985: 202-205).

The Women in Nigeria (WIN) organization confirms this experience in uncompromising language, while providing a poignant description of the working conditions that follow logically from the promotion of income-generating schemes.

Employment in home-based industries has for women the 'advantage' that they can earn some money while carrying on their household activities. This, however, is a dubious blessing, for the ability to cater to their children and family needs is outweighed by their lack of mobility and

independence from men and the fact that they have to work in isolation from other women and thus are less able (compared to market women) to organize around the conditions of their work. Like market women, those employed in cottage industry provide for low cost, labor-intensive goods and services that are essential for the reproduction of the urban proletariat. Yet (as a survey conducted in Kano has indicated) often their earnings do not match the minimum wage and they are always by far inferior to those of men employed in comparative work in the 'informal sector' (e.g. mechanics, leather workers, construction workers, etc.). Like the traders, women who work in cottage industry suffer from the absence of any form of social security and social services. But they suffer more from the dilapidated housing conditions and restricted space which are typical of Nigerian workers quarters, for they must spend all their time in the house and the little space available is further reduced by the presence of both their equipment (e.g. a sewing machine) and the materials and products they must store. Further, being home all day means that the double job is continually impinging on every minute of the day (WIN, 1985: 47-48).

Issue 5. Women as 'welfare' subjects

Implicit in all four of the above issues, as well as the issue of conceptualizing health problems treated extensively in Chapter 2, is the conceptualization of women as a 'welfare' problem, to be targeted by development projects. The statement about women as "a special group of people" by the Nigerian geographer, cited above, epitomizes this conceptualization. Income generation schemes, as projects to 'give women something to do', participate in this view of women as well. The view is an outcome of the application of the liberal approach to development policy, whereby individuals, or groups seen merely as aggregates of individuals, become the objects of 'projects'. Participants in the important 1984 workshop in Tanzania on "Resources, Power and Women" (ILO, 1985), in criticizing the 'project approach', identified women's income generating projects as a major contributor to the categorization of women's issues as 'welfare' issues. "The orientation of women's income generating projects should be changed from welfare to development. They should be based on women's main economic activities and should be economically viable and profitable" (6-7. See also the lengthy quotation in section C, chapter 2 from this workshop). Tinker (1981: 78-79) supports such a change of orientation:

There is a tendency to overload women's projects with welfare concerns: health, education, family planning. These often take precedence, and sink the enterprise. As self-sufficiency is preferable to dependency, so economic activities should be given priority over welfare programs. Recognizing the economic role of women is the starting point.

While much of the WID effort of the past ten years has had as an overt purpose the treatment of women as active agents rather than passive recipients of development, the aim has not materialized in a substantial shift away from the perspective. This is not surprising, given the lack of recognition within the liberal framework that individual agency is a potential that can only be

actualized through collective action, and hence collective action is the necessary subject of research and policy.

By contrast, the discussion above of bias in policy-making and policy implementation revealed both an ideological and a structural barrier to considering women differently. Staudt's (1985b) study demonstrates this dual barrier clearly. Regarding the ideological barrier, it is hard to consider women as other than objects when they are excluded, by reticence on the part of extension workers and planners, from decision-making and from receiving instruction in new technology. Regarding the structural barrier, given that women are absent from the formal institutions that channel policy and information, there is an organizational construction of women as 'other', standing apart from the development planning process. But the conceptualization of women as 'other', so deeply a part of western philosophical tradition, has not characterized African philosophy in the past. The way in which women have become marginalized conceptually, in accompaniment with the undermining of their traditional authority and autonomy, is the subject of section C, below.

C. Technology Transfer and the Decline of Women's Power (Issues 6-9)

Unequal access to development resources (issue 6); loss of legal rights and political power (issue 7); disruption of gender relations (issue 8); and the intensification of women's labour (issue 9) must all be seen in the context of the complex array of political and economic transformations that have taken place over the past one hundred years. Each of the case studies that follow document most or all of these issues bearing on technology transfer, although they do not usually provide an analysis of the political economy context. It is important to note that, in talking about the decline of women's power, we are talking about the distortion of gender relations in such a way that men too suffer in the long run from the profound disruptions to family and community life, even though they appear to be the beneficiaries in petty ways of women's extra labour, and of western ideology about male dominance.

In looking at the dialectical relationship between technology transfer and social process, we must make a distinction between on the one hand large scale projects, designed to develop an entire community or region, or to introduce economies of scale in production of agricultural commodities, and on the other hand projects or programmes designed to influence production and transformation work on an individual or household basis. Many of the factors impinging upon the individual and household have been reviewed in the survey above of the five issues pertaining to the politics of technology and gender. As well, many of the social and economic phenomena documented by the researchers assessing the large scale development schemes are characteristic of small scale technology transfer processes -- as Staudt's (1985b) study of agricultural extension services in Western Kenya, reviewed above, so clearly demonstrates. This section will therefore focus on large scale projects, in order to develop through the cases an understanding of the complexity of the issues pertaining to the decline of women's power. Two large scale projects are considered: one in Kenya, and one in Nigeria. Both have been thoroughly

assessed in terms of the interrelationship between technology transfer, gender and community.

The Mwea Rice Irrigation Scheme in Kenya

The case of Gambian women's loss of control of rice production has already been cited. The Mwea scheme in Central Province, Kenya, which introduced commercial rice cultivation in an area not traditionally producing this crop, exemplifies the range of problems generated for women, for gender relations and for peasant economy in general (see Hanger and Morris, 1973; and Wisner, 1982. Lewis, 1984: 181-182; and Agarwal, 1985: 102-105 give synopses on the scheme). Designed to fulfil both a social and an economic purpose: the settlement of landless peasants,¹¹ and the production of a valuable cereal crop for the Kenyan market, the scheme has been touted as a development success story by some development policy makers. There are over 3000 titled tenants plus their families, working family plots of 1.6 hectares in size, on a settlement where surface irrigation is provided. In 1982, the scheme was still showing a profit, and incomes were on the whole higher than expected.

Robert Chambers, one of East Africa's foremost researchers on and planners for rural development, who has studied Mwea since its inception in the mid-1960s, points rather scathingly to Mwea as a showpiece of the "rural development tourism" circuit (1983: 16).¹²

Those concerned with rural development and with rural research become linked to networks of urban-rural contacts. They are then pointed to those rural places where it is known that something is being done -- where money is being spent, staff are stationed, a project is in hand. Ministries, departments, district staff, and voluntary agencies all pay special attention to projects and channel visitors towards them. Contact and learning are then with tiny atypical islands of activity which attract repeated and mutually reinforcing attention. Project bias is most marked with the showpiece: the nicely groomed pet project or model village, specially staffed and supported, with well briefed members who know what to say....Such projects provide a quick and simple reflex to solve the problem of what to do with visitors or senior staff on inspection. Once again, they direct attention away from the poorer people.

¹¹ Thousands of Kikuyu were dispossessed of their land by British settlers in the colonial era. See Muriuki (1974) for an excellent history of the Kikuyu, and Brett (1974) for a succinct account of the process of dispossession.

¹² Of his own research involvement in Mwea, Chambers says the following in a footnote: "Mea culpa. In the 1960s so many of us students and other researchers were attracted to work on the (well-documented, well-organised and well-known) Mwea Irrigation Settlement in Kenya that farmers complained about interview saturation" (26-27, n.7).

But what of this showcase of development? Fortunately, the obsessive attention identified by Chambers has yielded a body of empirical material which feminist scholars have been able to interpret in order to generate a concrete illustration of the negative impact upon women and upon gender relations of such schemes. The following account builds upon the feminist analyses of Agarwal (1985) and Lewis (1984), which themselves synthesize the primary studies.

The aim of the scheme was cultivation of rice both as a food and a cash crop, in order to raise household income. The settlers had come from a farming system where unirrigated crops such as maize and beans were grown on women's plots for consumption, while coffee was grown on men's plots (with women working on the crops to produce a cash income for men). As many studies of the Kikuyu (the dominant ethnic group of the region) show, production on women's food plots was sufficient for occasional sale of surplus, as well as for subsistence (see Stamp, 1986 for an overview). At Mwea, in that men did not like to eat rice, women were required to grow the customary food crops. But the plots allocated for non-rice production were small and marginal in quality, and hence could not feed the family (plots for subsistence were not initially designed into the project). Further, women were required to work on their husbands' rice plots (men being the official tenants, while 'their families' once again were conceptually relegated to an ancillary status and role). Women's workload was thus substantially increased over that of customary agricultural production, especially at harvest time. As is typical for Africa in the past and today, women spent longer hours in production than men.

With regard to control over their labour, women traditionally were in charge of the allocation of their own time, within the bounds of customary responsibilities, whose designation was the prerogative of the corporate kin group as a whole (i.e. the lineage), and not the individual husband. In the scheme, however, the labour of wives and children was entirely under the control of husbands, while men had complete claim to the income from the paddies. Women were paid by their husbands with rice, the amount varying arbitrarily. Women would then be required to sell the rice on the black market, circumventing the rule that all rice be sold to the National Irrigation Board, in order to buy customary foodstuffs and other household goods. The proceeds from the rice was rarely adequate to cover household expenses, however. An additional problem was that firewood was no longer a free commodity to be gathered, but had to be purchased by the women (or money begged from husbands to cover the expense). The wood was of an inferior kind, requiring more constant attention to the fire than customarily. Ironically, if men hired labour to work the paddies, women's work burden was increased yet again, as they had to cook for the labourers.

Hence, on the one hand, women found themselves working harder, with much less independence and control over their use of time, and, on the other hand, there was a marked decrease in their subsistence output, their access to and control over cash income, and their say in decisions concerning the family. Not surprisingly, cases of women deserting their husbands and returning to the old settlements were not infrequent (Agarwal, 1985: 104).

The loss of women's power and autonomy chronicled here is backed up by the law of the land, given that the contract between the National Irrigation Board and each household is legally drawn up with the male head of household. As the sole legal tenant, the husband thus receives the full payment for rice sold to the Board. Further, in that women have no legal status vis-à-vis the family's productive land (this applies to non-scheme areas as well, where male heads of household have been registered as sole land owners), they have no collateral with which to obtain credit, in order to buy inputs to enhance production. See Newman (1981: 125-129) on land policy in settler colonies such as Kenya, South Africa and Zimbabwe, where African land was massively alienated. The land remaining to Africans in reserves suffered a major transformation in land tenure law, to the disadvantage of the community, which could no longer plan its use on a rational village basis. Women in particular lost out: see the discussion in section 4(a), chapter 5 on women's use rights in property and resources collectively owned by the community, and the Luo case study on land reform in chapter 4.

The subversion of women's position is linked to a decline in the wellbeing of the family, according to several important indices. Although water is plentiful, it is badly polluted. The studies do not mention the health implications, but one may speculate as to the likelihood of a serious bilharzia (schistosomiasis) problem in the scheme, as well as the infant diarrheal diseases associated with contaminated formula. Studies do reveal a decline in nutrition between 1966 and 1976, and recently, more than one third of children between one and five years old were found to be less than 80 percent of normal weight for their ages (Lewis: 1984: 181). The women are clear about the problem: on the one hand, they do not have the means to produce for their families and are thus heavily dependent on commodities, but on the other hand they do not have enough cash to fulfill their responsibilities to their families. With this loss of ability to fulfill their customary role, they have lost self-respect. One can thus argue that women and families subsidize economically, socially and with their health, the monocropping of rice on the Mwea scheme.

Lewis summarizes the Mwea experience as

prototypical of an extractive mode of development. It appears to encapsulate the colonial economy both in the role assigned to women and in the manner male profits are dictated by official rather than by market forces. Its design precludes the diversification of productive activities among both men and women -- a precondition for the development of a regional economy responsive to the communities' perceived wants. Such schemes are predicated on a given level of profit in a given form, obtained through a hierarchy of state, scheme management, and male household heads: women's labor is assumed to be an asset of the male head of household (182).¹³

¹³ An interesting question, which is beyond the scope of this study, is the problem of availability of rice in the Kenyan marketplace, and the impact of cereals dumping by western nations upon African

What neither Lewis nor Agarwal mention is what else is precluded by the design of the scheme: the continuation of village-based decision-making structures including both women and men; and the continuation of women's traditional patterns of association for social as well as economic cooperation. It was these associations that, in the past, provided women with a counterbalancing measure of power, and ensured that village decision-making was balanced in favour of all the community's members.

The Kano River Irrigation Project in Nigeria

Cecile Jackson conducted an extensive study of Hausa women in Northern Nigeria between 1976 and 1978, and has produced an important monograph on the Kano River Irrigation Project (1985). As well, she has studied the seemingly unlikely phenomenon of a Muslim women's strike, held by Hausa women in 1977 (1978). Her assessment of the project's impact upon women confirms the insights documented above, as well as demonstrating women's ability to engage in collective resistance to the subversion of their power. In the latter, her work goes beyond the understanding gleaned from the Mwea experience, and in that measure represents a synthesis of political economy insights and WID concerns called for in chapter 5. Although she does not investigate Hausa gender relations in depth, her study is thus an example of the direction that WID work should be taking. It should be noted that the Hausa women have been on the one hand at a greater advantage economically than the Kenyan women in the Mwea scheme, given the former's traditional participation in the market economy. On the other hand the Hausa women are at a relative disadvantage socially, given the predominance of Islam and its associated practice of seclusion of women.

A large scale irrigation project of 120,000 acres was established 50 kilometers south of Kano city in 1971. The Kano River Project (KRP) was designed to increase agricultural productivity. In the way that rice was the innovative monocrop for which Mwea was constructed, wheat for urban bread supplies was the intended crop of the KRP (although tomatoes were also planned for). The decision was made not to purchase the land and turn the peasants into tenants, a process of appropriation that would have been difficult given the high population density (463 per square mile), the complexity of land tenure arrangements, and the inevitable resistance of the peasantry. The government instead registered individual titles to land, installed the infrastructure of canals for irrigation, and then exchanged the individual

countries. During a research visit in 1981, I found rice to be extremely scarce, in spite of record yields at Mwea. Rumours circulated that the five truckloads of the Board's rice had been hijacked across Kenya's borders into several neighbouring countries -- a black market activity substantially beyond the petty infractions of Mwea wives. I saw local rice on sale in country markets not far from the scheme at seven shillings (about one dollar) per cup; at the same time, imported U.S. parboiled ('Uncle Ben's') rice was on sale in an elite Nakuru supermarket for nine shillings a kilo -- less than a quarter the price.

owner's non-irrigated land with equivalent irrigated land nearby. Usually, farmers had the same neighbours. Credit was provided by the scheme for the first two years; thereafter, the farmer was expected to have generated enough capital to sustain the new technology required for irrigated agriculture. Management was supposed to level the land, and provide fertilizer, seeds and water at cost. The crop was to be marketed through the local trading network.

The stated objectives of the KRP were "to increase food supply, to provide employment opportunities, and to improve the standard of living" (1985: xiii). But examination of the project documents led Jackson to the conclusion that there were implicit goals to the project as well.. These were similar to the aims of the Mwea scheme: to convert subsistence farmers into producers for the market. In spite of the massive change envisaged, "it was also hoped that the social fabric would not be fundamentally changed, that inequalities between irrigators and nonirrigators would not develop, that new skills would be acquired, and that outmigration would be stemmed. The scheme was predicated on the assumption that the local population would move from isolated and dispersed farmstead types of settlement to nucleated villages provided with services" (1985: xiii).

Jackson found that the goals of the project were not reached in several important respects, and that, moreover, there were serious consequences both for local production and nutrition; for women's economic power and for gender relations. The KRP scheme caused a loss of traditional crops: sorghum; tree products such as dates, baobab products and locust beans (mentioned in chapter 2 as an important weaning food); vegetables and other food produced under the traditional river-side shaduf flood irrigation system (this system was wiped out by the construction of the Tiga Dam).¹⁴ Further, the traditional symbiosis between the agricultural Hausa and the nomadic Fulani -- a relationship particularly beneficial to women -- was undermined. Project organizers considered the wandering herds of Fulani cattle a problem and so designed the scheme to prevent the Fulani from passing through. Thus, a vital food for both groups, fura (millet paste balls) could no longer be made and eaten at the midday meal, because Fulani women could no longer sell Hausa women the milk to make the nutritious snack. Meanwhile, there were unrealized plans to produce fresh milk for Kano and the region from imported dairy cattle. "This is an example of the planners' blindness to the food needs of the local population and to the entrepreneurial contribution of women" (24).

Another example of such blindness related to small livestock. In spite of the project's stated objective to improve the standard of living, and the traditional importance of poultry, controlled by women, to family nutrition, the project banned household poultry-keeping. In the face of drastic constraints on this practice and the lack of any support in the form of

¹⁴ Lost production downstream of the new dam due to the cessation of flooding was estimated at "67 percent for rice, 33 percent for cotton, 100 percent for wheat; 90 percent for residual moisture vegetables, 75 percent for shaduf-grown vegetables, 90 percent for tobacco, and 75 percent for calabashes" (1985: 23).

technological know-how, the women nevertheless persevered in raising domestic animals, which continued as an important food source.

Overall, the intention was that wet-season farming would meet the local food needs, while all dry-season farming would be surplus. After six years of the project's operation, however, rising food deficits were being recorded in the region, along with a decline in the availability of sorghum, millet, beans and cassava. Nevertheless, on the project farms themselves, families were able to benefit from the tomatoes and rice grown thanks to the entrepreneurship of the project women.

It can be seen from the above that the local political economy was dramatically changed by the KRP. The decline in the region's food self-sufficiency was part of a transformation whereby:

The range of choices available to the farmer has been reduced, as to what to grow and how to grow it. He has become dependent on the KRP management for inputs to irrigated agriculture, certain land has acquired a relatively high value, there is progressively more renting of land and so on. Although the area has been integrated into a market economy for many years there is little doubt that the KRP has accelerated certain trends and initiated other whereby the region is becoming further and further integrated into the world capitalist system....

What this greater dependence on the state and upon the wider economic system meant for women is something it would be hard to term 'development'.

For farmers wives generally,¹⁵ the KRP has meant increasing seclusion and their progressive withdrawal from most agricultural tasks -- with the exception of wheat harvesting. However, the specific way in which women have experienced this irrigation scheme depends on a variety of factors; age is an important one, for older non-secluded women have found a variety of wage labouring opportunities now available to them (1978: 22-23).¹⁶

¹⁵ I disagree with Jackson's use of the term 'farmer's wife' which implies once again that women are ancillary to farm production. The logical absurdity of talking about 'farm husbands' makes my point.

¹⁶ Many studies have shown (for example, Cohen, 1969; Callaway, 1984) that in African Muslim societies, a substantial increase in men's income, as was the case with the wheat crop returns in the KRP, leads to a power imbalance in the sex-gender system that is manifested in, and reinforced by purdah (shulle in Hausa). In other words, increased productivity is very often linked in an equation with increased control of women. Women who formerly worked outside their compounds are secluded once their husbands become wealthy. It is important to note, as Cohen does, that it is a mark of status, rather than a sudden access of piety, which leads men to desire that their women be secluded. The point, of course, is that religious ideology responds flexibly to political and economic conditions.

Within the seclusion of their homesteads, women indeed showed ingenuity in converting aspects of the project design to their own use while receiving no technological input. The drying and selling of tomatoes, as well as the poultry management mentioned above, are examples. Women were able to generate meagre income, as well as some food for the family, from such activities in this restricted context; i.e. they had a measure of economic security, if little autonomy, within it. For older women, less constrained by rules of seclusion, a solution was found to the worsening gender relations, whereby male heads of households increasingly controlled women's farm labour and income. This solution was the large scale movement to low-paid agricultural employment (at one seventh the daily wage of men). The women were hired by the multinational company growing vegetables for the European winter market (Jackson, 1978: 22-23 and *passim*). The explanations for this seemingly irrational pattern, are complex, and are explored in the context of Kenya in chapter 4 below.¹⁷ Briefly, Jackson argues that working for the company provided women with much more autonomy than working for "husbands or brothers or male kin of any sort" (1978: 23), whom they would find it impossible to defy.

The authority of men over their wives in the household, which is not altogether a product of Islam, provides a model for the agricultural work relations, such as in the wheat harvest, and this makes rebellion by the women workers a much more difficult matter. In this sense we can see again how the household is part of the reproduction of structures of domination for it is only when operating outside of kin, marriage and village connections that women were able to protest against their exploitation [in the strike against the bean-growing multinational -- 1978: 24-25]. And paradoxically it is also the household that enables them to make this challenge for marriage can give women tactical mobility. For women, the household allows some material independence but also entails ideological oppression....Unsurprisingly, given the value Hausa women place on independence, the wage they are prepared to work for is very low. Wage labour, indeed female production generally, seems to be motivated not by the desire to accumulate, nor by the need to reproduce, nor by the need for subsistence, nor by the demands of the state but by the quest for autonomy (1978: 33, 36).

The conclusion Jackson draws is that the KRP created no incentive to Hausa trading women to make investments in production within the household, and made no link between women's entrepreneurial activities and the project's goals for agricultural production. The complete neglect of women's concerns simply confirmed for the Muslim women that their best interests lay in

Jackson reports that even when women's labour was required in the KRP wheat fields, informants would refuse to acknowledge that they engaged in this work.

¹⁷ Working for a company or a plantation for a pittance, rather than upon the family land, is a pattern I identified in my research on Kikuyu women in Kiambu, Kenya (see Stamp, 1975-1976; 1986).

removing themselves as much as possible from the household economy, while creating a separate women's world into which to place their energies and generate independent resources -- however meagre -- with which to endow their daughters (1985: 57). Clearly, a vital resource for the community -- women's energy and initiative -- was diverted from it, and rendered far less of a contribution to local self-sufficiency than it might have been had the impact of the scheme on the sex-gender system been taken into account.¹⁸

D. Women as Decision-Makers in Technology Transfer: The Importance of Women's Grassroots Organizations (Issue 10)

In practically every study that has considered women's decision-making role within African communities, women's organizations have been identified as central to the authority they wield. While co-wives in a polygynous marriage had some collective say within the context of the marital economy, it was village-based groups, organized by age or by voluntary membership, that provided women with power that counterbalanced men's dominant position (see the case studies in chapter 4 for references to this literature).

Yet in development literature and policy, and in much of the WID material as well, women's organizations have suffered from the same 'target group' approach criticized earlier. With little analysis how, when and where women have formed their own groups, development researchers and planners had no awareness of the importance of distinguishing between types of groups, particularly between those generated from within the community's own customs and needs, and those imposed from outside. Thus it was possible for the 1976 USAID-sponsored survey of women in rural development (Mickelwait, Riegelman and Sweet, 1976: xiii-xv) to conclude that in many situations, "new women's associations, backed by educated urban women, might serve as a non-male-threatening agent for overcoming societal restrictions to an enlargement of women's roles."

This is precisely the approach taken by many agencies and governments, so that there is now the common phenomenon in African countries of nationally sponsored women's organizations (such as Maendelao ya Wanawake -- 'Progress of Women' in Kenya) which serve as a safe showcase of government's formal commitment to women's interests, while allowing the co-optation of national feminist efforts and ideology. In most cases, the organizations are deeply divided between the elite women who run them, and the alienated local women whose interests are not served by them (see Wipper, [1975/1976] for an analysis of this problem in Maendelao ya Wanawake. The situation has not

¹⁸ Another excellent case study, that advances feminist political economy understanding of the impact of development schemes upon sex-gender systems, is Anna Conti's "Capitalist Organization of Production Through Non-Capitalist Relations: Women's Role in a Pilot Resettlement in Upper Volta" (1979). An important part of her analysis, which is confirmed by the conclusions reached in the next chapter, is her exploration of the way in which traditional gender relations are recruited into the service of intensive commodity production.

changed since the time of her study, as the 1986 scandal over the embezzlement of the organization's funds by part of the leadership reveals).

Because they have remained invisible, the indigenous groups have not been identified as an institution to be protected and enhanced by development efforts. As a consequence, women frequently lose, through the introduction of new technology to their communities, the opportunities upon which their social activities were based. For example, new water systems such as pumps, in removing water collection from women's daily routine, removed an important occasion for women to gather and talk while working. While no-one would argue that women should go back to collecting water from polluted rivers, the loss of this social time needs to be recognized as a serious setback for women's abilities to network, and hence for their ability to sustain the social and economic life of the community.

Another aspect of development efforts that has undermined women's groups is the widespread shift to cash cropping, with the attendant shift of production returns from women's control to men's control. An interesting study of attitudes to work in a Nigerian city by a Kenyan scholar (Wa Karanja, 1981) revealed that almost all men and women believed that both husbands and wives should keep separate bank accounts to maintain marital harmony. The women believed that the separate accounts were necessary because of the different spending patterns of men and women (1981: 57-59). Wa Karanja's findings reveal a continuity from the past to the present, in the division of economic responsibility between men and women. Contemporary women use their income to fulfill their responsibility as primary contributors to the family's wellbeing, in the way that in the past they shouldered the responsibility for production of food and maintenance of family health. Studies on women's groups (see chapter 4 below) reveal that the major channel for resources, in the past or present, whether cash or produce, was through women's groups. The village welfare and production system was in large part maintained -- and in many cases is still maintained -- through systems of fees and pooled resources circulating among women.

The loss of control over the product of their labour has seriously undermined women's ability to fulfill these responsibilities. Further, once out of their hands, the returns from their efforts no longer go to the sustenance of their families in many cases. When men appropriate the cash returns from women's work once commodity production or new technology is introduced (as in the case of the hydraulic oil-palm presses, cited under issue 3 above, and as Muntemba demonstrates in the study summarized in chapter 4), they treat this income as legitimately falling within the domain of their own expenditure patterns. One example of this, personally encountered in Samburu District, Kenya, in 1973, was the case of a husband of four wives who banked the earnings from his wife's industrious production of beadwork for tourists, and with the money paid the bridewealth for a fifth wife, fifty years his junior. The other wives complained bitterly that the stock of cattle supporting the polygynous family was inadequate to support another wife and her children, and that their husband was satisfying his vanity rather than the needs of the family.

Given that the former relation between women's productive capacity and their capacity to care for their families has been broken, by the diversion of a significant proportion of their economic return to the male economic domain, women's groups have lost the secure economic basis for their activities. It is not surprising, therefore, that women prefer to work outside the family network for a small wage which they may control, rather than labour on the more productive enterprise of cash crop cultivation on family land. In this regard, I disagree slightly with Jackson's conclusions, cited above, where she argues that there is only a political, and not an economic rationality to women's wage labour outside the family farm.

In spite of its lack of historical analysis of women's groups, the WID literature has identified some important priorities regarding the group participation of women in development. The 1984 workshop in Tanzania on "Resources, Power and Women" (ILO, 1985) was particularly forceful on this topic. In particular, participants stressed the necessity of moving beyond the castigation of development efforts for their negative impact on women, to a focus on those special projects that, by genuine development criteria, did succeed. Only through a careful analysis of such successes, in contrast to poorly thought-out projects, would planners be able to generate the basis for more consistent success in future.

The purpose of the workshop was to exchange information and views on successful and innovative projects for rural women, to draw lessons from successful experiences, and to strengthen ongoing projects and stimulate the initiation of new ones.....Women's issues are central and not peripheral to development. The struggle for equality is not a struggle between women and men -- it is a struggle to change social structures and attitudes (ILO, 1985).

Two projects in Sierra Leone deemed 'successful' by their designers and the government were presented to the workshop (by Filomina Steady -- ILO, 1985: 13), and the comparison between them provided a useful lesson regarding women's organizations and development. The first project, co-sponsored by the Federal Republic of Germany and the Sierra Leone government, introduced new fish-smoking technology to Tombo, a fishing village, with the aim of improving the returns to fishing as an artisanal activity. The project, through the new technology as well as better storage facilities, made it possible for women, who traditionally processed fish for sale, to raise their productivity and to control fish prices. To control the supply of fish, and circumvent the necessity of buying fish from men, some women purchased their own boats. While the project had many successful elements, there were serious questions as to the sustainability of women's self-sufficiency in the fish processing business. The need for foreign exchange to maintain the imported technology; the dependence on foreign experts; and the purely profit-making purpose of the scheme, meant a greater dependency than before for women upon elements beyond their control. By feminist and grassroots definitions of development, therefore, the project was not successful.

By contrast, the second project was a self-help effort. In 1977 the Gloucester Development Association Project was founded to promote village development. It did this by encouraging improved farming methods, providing

market stalls for the sale of produce, creating day care centres and adult education schemes, and developing a system of bulk food purchase. Its operating budget was a minuscule 500 leones per annum (compared to the 900,000 leone cost of the six year fish-smoking project). Steady reported that "its achievements are significant, self-sustaining and replicable."

Scattered through the literature are similar success stories. The corn mill societies in Cameroon have already been mentioned in section B.1. above (see Wipper, 1984: 75-76). On the basis of fifteen mills loaned to villages in the 1950s, corn mills societies were formed, members paying a monthly fee to use the mill. After one year, thirty villages had paid off their loans and more mills were bought. Eventually, there were 200 societies with a membership of 18,000. As is often the case when women form associations for a specific purpose, the associations soon expanded their concerns from food processing to other issues typically of concern to African village women (Keyi, 1986). Wipper (1984: 75-76) summarizes the Cameroonian village experience:

From the social gatherings that took place around the corn mills came the idea of holding classes in cooking, soap-making, child care, hygiene, and nutrition. The women then set about making bricks and cutting bamboo in order to construct a meeting hall. As the societies' strength increased, the women began to handle long-standing problems. They bought barbed wire on loan and put up fences to protect their gardens from stray cattle. The loan was repaid by putting more land under cultivation. Department of Agriculture assistants introduced a new and better strain of corn, which yielded an abundant harvest. The women began to understand the need for contour farming. Poultry schemes were begun, village plots reforested, and water storage facilities built. The societies' most ambitious scheme was the establishment of a cooperative store to allow women to import articles unavailable locally. Five thousand women raised the initial capital and several stores were soon in operation.

Even in conditions of deep impoverishment, women are able to create collectively the means for improving their community's wellbeing. Chege (1986) reports the manner in which women in a Nairobi slum formed a communal food production group, the Mukuru-Kaiyaba Women's Group, to farm a 10-acre piece of waste land owned by the Kenya Railways, that was adjacent to their shanty village. Organized along the well-structured lines of traditional Kikuyu women's groups (labour contribution and sharing of returns are carefully regulated -- see the Mitero case study in chapter 4), the group grew maize, beans and vegetables. The group's purpose extended beyond collective cultivation, however.

The women sell the food they grow to get income for the group and to plan for other projects. As well, each member gets a portion of the food for her family. A major project they have proposed is the levelling of their land next to the Ngong river, so that it can be irrigated. Another is to fence in a small dam on the river, and stock it with fish. The Health Inspectors from the City Council of Nairobi have approved the proposed fish project. Once they have raised the funds and fenced the dam, the

women plan to rent the dam to fishermen, charging entrance fees (Chege, 1986: 77).

In spite of growing evidence as to the innovative capacities of Kenya's many grassroots women's groups, their efforts and abilities have not been harnessed to development as they might be, because once again, the 'welfare approach' hampers viewing them as the progressive force that they are. Officials who interact with the groups are usually community development officers, or home economics extension workers (Ventura-Dias, 1985: 209-210). If one can identify genuine development in Kenyan villages, however, the cause may usually be located in the efforts of the village self-help groups.

CHAPTER 4

FEMINIST POLITICAL ECONOMY: UNDERSTANDING THE TRANSFORMATION OF GENDER RELATIONS IN AFRICA

Although the feminist political economy scholarship has only treated technology transfer issues incidentally, as aspects of women's loss of power and autonomy in village and family, the analyses provide the grounding upon which an understanding of the phenomena discussed above can be based. In particular, the centrality of women's organizations to African community life can be understood in its historical complexity. The discussion of feminist political economy and the study of African women in Chapter 1, section C., lays the groundwork for the analysis that follows.

In a recent article on Kikuyu women's self-help groups in Kenya (Stamp, 1986), based on fieldwork in 1974 and 1981 (since updated, in 1985) I use the experience of the women of Mitero village in the past and present to develop theoretical tools for an understanding of sex-gender systems in precolonial Africa, and of the way in which they have been transformed in colonial and post-colonial times. The study draws on a number of feminist political economy texts, including non-African material, in the development of its theoretical argument. Other political economy studies of gender relations in Africa substantiate many aspects of the empirical findings, and point toward the theoretical construct I present here. The first part of this chapter thus presents the Mitero study as a case that exemplifies the feminist political economy approach. The second part of the chapter then summarises studies by two African scholars to substantiate the case for feminist political economy and to demonstrate the development of this school of thought within Africa. While details about women's organizations differ, and while much more work needs to be done on sex-gender systems, for example in matrilineal societies, the categories of analysis developed here provide a valid template for the consideration of gender relations in other African societies.¹

¹ The discussion here draws excerpts from "Kikuyu Women's Self-Help Groups: Toward an Understanding of the Relation Between Sex-Gender System and Mode of Production in Africa," pp. 27-46 in Claire Robertson and Iris Berger, eds. Women and Class in Africa. New York: Holmes & Meier, 1986. Some additional material is combined with the published analysis. For a short account of the research experience, which was significantly shaped by the group members themselves, see Patricia Stamp and Rebecca Njeri Chege, "Ngwatio: A Story of Cooperative Research on African Women," Canadian Woman Studies/les cahiers de la femme 6(1): 5-9. 1984. The research on Mitero would not have been possible without the able assistance of Rebecca Chege, to whom I owe much gratitude.

A. Gender Relations and Women's Self Help Groups in Mitero, Kenya

The Kikuyu are a vigorous, Bantu-speaking ethnic group of over 2 million people that has dominated the Kenyan political economy for much of the postindependence period. They inhabit a fertile hilly region of Central Kenya. Patrilineal, polygynous and horticultural (that is, tracing descent through the male line and practising hoe cultivation of crops), they were typical in many ways of African agricultural societies south of the Sahara. Their communally organized political economy and their gender relations based on bridewealth were shared by most Bantu societies for much of their history (and by many societies belonging to other linguistic groups as well).

A society such as the Kikuyu has traditionally been considered patriarchal, but an analysis of its gender relations demonstrates that the concept of patriarchy cannot be uncritically applied. A number of feminist theorists, seeking to explain what they perceive as the universal domination of women by men throughout history, have used the concept of patriarchy to designate the gender system under which all forms of oppression occur. As Rubin (1975: 167) states, however, "the term 'Patriarchy' was introduced to distinguish the forces maintaining sexism from other social forces, such as capitalism. But the use of 'patriarchy' obscures other distinctions. Its use is analogous to using 'capitalism' to refer to all modes of production." Rubin argues that "sexual systems have a certain autonomy and cannot be explained in terms of economic forces" (1975: 167). By contrast, "sex-gender system" is a neutral, overarching concept. It may be used to classify all forms of gender relations, from patriarchal and oppressive to egalitarian. Patriarchy, then, is one of a number of sex-gender systems.

Focussing on sex-gender system as a sphere of human activity and relationships separate from, but intimately linked to, material production and reproduction allows the restoration of gender relations to their rightful place at the centre of political economy. More specifically, such a focus contributes to a better understanding of the complex relations between the economic, social and ideological aspects of male-female relations in a society such as the Kikuyu, both in the precapitalist era and today. Rubin draws on the flawed but useful work of Claude Lévi-Strauss on kinship (1969) to define her concept of sex-gender system. Lévi-Strauss classified the types of 'exchange of women' that are integral to human kinship systems (for example, women exchanged for women, women exchanged for bridewealth, women accompanied by dowry to the groom's family). Rubin suggests that "the 'exchange of women' is an initial step toward building an arsenal of concepts with which sexual systems can be described" (Rubin, 1975: 177).

There are problems with Lévi-Strauss's -- and Rubin's -- emphasis on exchange, however. Kettel (1986: 55) stresses the importance of avoiding a view of women as "primordial pawns in the affairs of men," and specifically as a form of "capital" controlled by men (as indicated in chapter 3, it is precisely this view of women as men's assets that has stymied development efforts). Leacock (1981: 234) is similarly critical of the view of women as passive objects in the marriage game. She questions the current view that men are "the universal exploiters of women, albeit at times gentlemanly exploiters, who graciously acknowledge women as 'the supreme gift'," to use

Lévi-Strauss's expression (1969: 65). On the basis of much ethnographic evidence, she makes an assertion that is central to feminist political economy:

The authority structure of egalitarian societies where all individuals were equally dependent on a collective larger than the nuclear family was one of wide dispersal of decision making among mature and elder women and men, who essentially made decisions -- either singly, in small groups, or collectively -- about those activities which it was their socially defined responsibility to carry out. Taken together, these constituted the "public" life of the group (Leacock: 1981: 24).

These decisions concerned marriage, among many other things. Going beyond Rubin's idea of woman-exchange then, we can view women not as simply passive objects in their own exchange, but as active agents participating with men to "make marriages" (Collier and Rosaldo, 1981: 278), organizing women and men into social relations for biological reproduction.

A categorization of sex-gender systems, then, will examine the different ways in which marriage is organized and seek to link them to different patterns of economic and political organization. In turn, arrangements by which women circulate vary and can be correlated with differences in their autonomy and authority from one society to another. A number of studies confirm Rubin's proposition that there are regularities to types of marriage exchange by which we can precisely define sex-gender systems.

For the purpose of setting out the main features of the bridewealth sex-gender system, a simple comparison will suffice. In a society with reciprocal exchange of women between kin groups, such as the Lele of Zaire (Douglas, 1963; cited in Rubin 1975: 205), a man must have a kinswoman whom he can give in marriage in order to get a bride himself. Further, each marriage incurs a debt. The web of debts and schemes for control of women leaves them little latitude for independent action. Where a woman's family receives bridewealth (which the family can use in turn to obtain a bride), such a web of debts and staking rights does not exist. "Each transaction is self-contained" (Rubin, 1975: 206). But it places the bride in a network of social ties that constrains her action throughout her marriage. Bridewealth systems vary considerably, and some involve conversion of bridewealth into male political power (see Mackenzie [1986], chapter 5, for a fascinating account of this network among the Kikuyu). But always, the fulfillment of the material contract depends upon a wife's performance as a procreator and producer; a number of political and economic considerations rest upon her marriage. Conversely, the success of her marriage depends on the ability and willingness of her affinal kin (her relatives by marriage) to fulfill their obligations to her family.

Thus a marriage, rather than being the concrete, once-only expression of a debt fulfilled or incurred, is the ongoing manifestation of contractual relations among a web of kin -- and a woman's own actions have much to do with the furtherance of those relations. As Leacock puts it, "In some societies, women move back and forth as valued people, creating, recreating and cementing networks of reciprocal relations through their moves, which are recompensed

with brideprice" (1981: 241). The substantial rights of wives to control over the means of production and to ownership of the product of their labour in precolonial Africa is an indication of the power of their central position in the bridewealth system. Conversely, the bridewealth system may have been favoured in those political economies where the nature of economic and historic opportunity fostered a structure of economic participation for women that allowed them such control. It is significant in this regard that the dowry sex-gender system, with its concomitant poor position for women, is associated with the plough societies of Asia, while the bridewealth sex-gender system is associated with the hoe cultivation societies of South East Asia, Africa south of the Sahara, and other parts of the world (Boserup, 1970: 48, 50).²

The bridewealth sex-gender system is also correlated with polygyny (marriage of a man to two or more women). Contrary to the received truth that polygyny always oppresses women, the polygynous household may offer women a basis for solidarity and task sharing. At the level of the household, cowives cooperate to organize production, consumption, and child care. Although friction between cowives is widely reported, many studies also stress the economic and political advantages of polygyny, including the autonomy made possible by shared responsibility (Mullings, 1976: 254; Obbo 1980: 34-35; Boserup 1970: 43).³

Further, in societies with the bridewealth sex-gender system, there are often organizations that express women's power at the political level, such as the women's age grade organizations of the Kikuyu,⁴ or the market trading organizations of Ibo women in eighteenth century Onitsha, Nigeria (Sacks, 1982: 3). Thus, while women come under the jurisdiction of their affinal kin - often oppressively so -- they have in the bridewealth sex-gender system, the material, political, and ideological base for relative power and autonomy.

² As a cautionary note, it is important to avoid when considering Asian sex-gender systems the kind of simplistic judgments that have dogged understanding of African society in the past. There is evidence, for example, that Indian women, particularly in the lower castes, enjoyed a more favourable position in the past than is commonly believed (see Duley, 1986 for a literature review).

³ There is evidence that co-wife jealousy is a construct of patrilineal ideology, whereby brotherly solidarity among men is the social glue that holds kin-based societies together. It is telling that the word 'co-wife' in most African languages shares a root with the word 'jealousy'. Differences between men, for example between half-brothers over their patrimony, can thus be laid at the door of their mothers who, it is true, will compete with each other on behalf of their sons for the lineage resources.

⁴ An age grade is a social organization with a series of stages through which an individual passes during her or his lifetime. An age set is a group of people affiliated by age: each set progresses through the age grades, from junior to elder status.

Women's relatively powerful position in African societies, compared with many other precapitalist cultures, is attributable to the prevalence of rich and complex kinship organization based on bridewealth.

The Kikuyu were organized by descent into clans and lineages and by rank into age grades.⁵ There were no chiefs or centralized political authorities - although individual men could become influential by manipulating material wealth to create political prestige. Women were affiliated with their husband's patrilineage through bridewealth, which legitimized the marriage, and secured lineage membership for their offspring. They retained membership in their natal lineage however, and as lineage sisters could exercise rights in lineage resources if necessary (see Sacks, 1979). Usually, their major economic ties would be through their children to their husband's lineage, but sisters would be expected to participate with brothers in lineage decisions, and widows and unmarried women would have use rights in their lineage land. As Sacks makes clear, their position vis-a-vis their natal lineage was a higher one than their position in relation to their husband's lineage: in other words, they had higher status as sisters than as wives (see also Mackenzie, 1986).

The mode of production associated with this form of social organization is the communal mode of production. In this mode of production, kinship is the basis of production relations. All people are members of a kin corporation -- the lineage or the clan -- which owns the chief means of production, the land. In principle all members, male and female, stand in the same relation to the means of production and share decision making regarding political and economic matters, as suggested above (Sacks, 1979: 115). Relations of production are thus cooperative rather than antagonistic in principle. The authority to make decisions, however, is vested in elders, who in practice exercise ideological, political, and juridical power. Moreover, it is male elders who have preeminent authority. Among the Kikuyu as elsewhere, elders were organized for the formal exercise of this authority by the age-grade structure (Muriuki 1974; Leakey 1977). Male elders had privileged status and were able to appropriate in large measure the labour of younger men and of women, as well as to make decisions regarding access to the corporately owned land. They thus exercised considerable control over the means of production.

The counterbalancing rights of different categories of people tempered this control. Sons had rights to land and stock with which to set up their own homesteads and to bridewealth; daughters had rights which lapsed on marriage but which they could reactivate if necessary; lineage wives had rights to the use of land and livestock, owned the produce they were responsible for growing, and controlled its distribution to a large degree. Further, they owned their own houses and controlled the resources of their

⁵ A clan is a large social group that traces its ancestry to a common founder, through either the male line (patrilineal) or the female line (matrilineal). A lineage is a smaller group of kin, often a subgroup of a clan, that traces its ancestry by known links to a founder in the more recent past.

sub-household within the polygynous homestead (Kenyatta, 1938: 11-12, 171-72; Middleton and Kershaw, 1965: 20; Routledge and Routledge, 1910: 47). Women as elders had collective authority in a wide range of matters (Stamp, 1975-1976: 25; Kershaw, 1973: 55; Clark, 1980: 360; Kenya, 1938: 108; Hobley, 1938: 274).

Kikuyu society demonstrates the point that the communal mode of production, while fostering unequal relationships between elders and youths, and men and women, is fundamentally a classless mode of production, in that no group is free to appropriate and accumulate for its sole benefit the surplus produced by another group. The bridewealth sex-gender system was vital to the communal mode of production among the Kikuyu, and gender relations were a shaping force in the nonexploitative relations of production. While some scholars have argued that such kin-based societies had a class structure, based on the elders' appropriation of the labour of women and young men, I consider this argument incorrect, in that it is based on a misunderstanding of class. Class is a category which is self-reproducing through the relations of production (for example a bourgeoisie maintaining itself through the production of capital from the value created by a working class). In that all members of communal societies become elders, the ability to appropriate value produced by others is a function of the life cycle, rather than of class division. Moreover, the value appropriated is shared through a complex web of kin and associational obligations, and is not hoarded by elders. In communal societies, prestige very much depends on generosity. An accurate understanding of the communal mode of production is necessary for a clear perception of the transformations in contemporary African society: this is why feminist political economists argue that traditional gender relations have been distorted, and are now exploitative, in a way they were not in the past. It is the past pattern of relative egalitarianism and autonomy for women that women today are trying so hard to recapture or retain: much of their behaviour in regard to development schemes (for example, that of the Hausa women in the KRP project discussed in chapter 3) can be explained in these terms.

It is true however, that gender relations were only relatively egalitarian. The bridewealth sex-gender system involved an element of female subsidy whereby female labour could be transformed into male wealth or prestige. Clark (1980: 360-65) and Ciancanelli (1980: 26) both confirm this for the Kikuyu prior to British contact. The subsidy was an important factor in the development of athamaki or 'big men' among the Kikuyu. Men achieved the position of muthamaki (singular) by successfully manipulating the tangible and intangible assets of kinship contracts. Clark summarizes the means whereby gender relations were organized to yield such assets:

Through the exchange of bridewealth-livestock, marriages were legitimated, and women whose children increased the size of the group were incorporated into the family. These women put more land under cultivation, and enabled the distribution of more foodstuff. The mobilization of wealth in the form of land, livestock and people is a single, though complex, process which collapses the division between subsistence and political economy (1980: 361).

Women could enhance a muthamaki's position very directly by agreeing to cook and distribute the food and beer required to attract work parties of young men to clear new land. These men would then become his tenants and political followers. There was nothing to compel women to contribute this effort: consequently they wielded considerable bargaining power through their monopoly of the beer brewing craft.⁶

It is clear that the very constraints and obligations of the bridewealth sex-gender system -- to bear children for their husband's lineage, to produce food and offer hospitality, to act as the linchpin in a wide network of affinal kin relations -- provided women the opportunity to exercise political power and the authority to make decisions. The age-grade system was a chief means by which women took up this opportunity. It provided the base for their strategies to generate resources and the forum for their collective decision making with regard to matters within their sphere of authority. Women's age-grade structure was simpler than the male system, based as it was on the childbearing cycle (Kertzer and Madison, 1981: 125-28 discusses the different relation of men and women to the life cycle as it pertains to age-grade structure). The two active age grades were nyakinyua, comprised of elders whose first child had been circumcised, and kang'ei, women with uncircumcised children (i.e. younger than twelve to fifteen).⁷ The anthropological data on women's organizations in former times is meager and contradictory. MacKenzie (1986, chapter 6) gives a detailed consideration of women's age grade and age set structures. She has, through her recent research, added essential new elements to the understanding of women and age grades, which have been largely ignored in the East African literature. Her interpretive reading of the literature on the Kikuyu is a model for feminist political economy research.

Women elders interviewed in my study on Mitero village in 1974 gave detailed accounts of ongoing organizations known as ndundu which had operated since before the time of their grandmothers and which combined economic, social and juridical functions. Ndundu is often translated as 'council' and it is significant that the same word is used for the council of male elders. A central purpose of the ndundu was cooperative cultivation, but they provided women with organizational and affiliative bases for nonagricultural pursuits as well. Kang'ei women operated under the authority of nyakinyua and were required to perform services for the latter in order to progress through the organization's ranks. Thus, the control of younger lineage wives by their female elders represented a legitimate authority counterbalancing patrilineal control of women and also put considerable human labour at the disposition of women elders as a group. Clark gives an apt summary of Kikuyu gender relations: "Despite an ideology of male dominance pervasive in many kin

⁶ Important to understanding this is the recognition that in Africa, as elsewhere in the pre-industrial world, beer was an important source of nutrition as well as a recreational substance. With colonial importation of beer factories, women lost not only an occupation but a valuable basis of social influence.

⁷ Girls as well as boys were customarily circumcised among the Kikuyu, although clitoridectomy was banned in Kenya in 1982.

relations and in areas characterized as the 'prestige economy,' Kikuyu women emerge as the actors with control over resources vital in a system in which relations of production enter into political strategies and are built into the social relations of power" (1980: 368). Sacks's point about sisters and wives coincides with this position. One could argue that not only did lineage sisterhood provide women with material resources to call upon if necessary, but that it created a metaphor of 'sisterhood' which extended to all women, and which acted as a constraint upon overbearing subordination of wives by husbands. In other words, every wife was somebody's sister.

In the picture that emerges of traditional Kikuyu women's organization, we can see the lineaments of women's contemporary collective activity, which were described time and again in chapters 2 and 3 for societies all over the continent. Variations on the Kikuyu experience have been documented in numerous other studies (see, for example, Okeyo, 1980, summarized below; Van Allen, 1972; Oboler, 1985; and, for an overview, Sacks, 1982). It is to the remnants of these organizations, patterns of authority and practices of autonomy that women cling in order to resist the negative impact of technology transfer, or to convert the innovations to their advantage.

What happened to women's power and autonomy? The transformation of sex-gender systems is tied up with the transition to capitalism. Whereas in Europe this transition entailed the dissolution of the precapitalist mode of production -- feudalism -- and the development of a straightforward capitalist class structure, colonized societies are characterized by the articulation of precapitalist and capitalist modes of production.. Precapitalist elements, located in the peasantry, are retained in a dominated and distorted form. These elements include kinship structures and relations of production, age-based organizations, gender relations, and traditional ideologies. The transformed elements serve to subsidize an underdeveloped form of capitalism, through production of cash crops both by smallholders and plantation wage labourers. Some of the negative consequences for African communities of such commodity production have been chronicled in chapter 3. One example would be the recruitment of elders to the task of promoting cash crop production.

An important aspect of this underdevelopment that should be stressed is the unequal exchange upon which sale of primary commodities on the world market is based, and the vulnerability of both producing peasants and the exporting nations within which they live to the vagaries of the international market. What makes unequal exchange and an unstable international market possible (i.e. what keeps peasants producing under such adverse circumstances) is the subsidy provided by peasants -- chiefly women -- who grow food for subsistence and sale on marginal land. Low prices of products and low agricultural wages reflect this element of peasant subsidy: they are made possible by the reliance of producing peasants and wage labourers upon the production of the peasant household for at least part of their subsistence. Wages or returns to commodity production are rarely sufficient fully to support a family. In other words, capitalist enterprise in Africa need not provide a 'living wage' to workers or producers.

The traditional/modern dichotomy thus stands revealed as a fallacy: the peasantry, far from being the 'traditional' -- and implicitly 'backward' --

sector of modern African societies, can be seen as an impoverished class created by the relations of production that were imposed on precapitalist societies in the colonial era. It is because of the vulnerability and dependency of contemporary peasants and societies that the present era is labelled 'neocolonial'.

With regard to gender relations, elements of the bridewealth sex-gender system have also been retained in a dominated and distorted form. At the ideological level, the dynamic tension between formal patrilineal domination and both formal and informal female power has been snapped, and patrilineal domination has united with Victorian and Christian notions of male superiority (Obbo, 1980: 37-39). Bridewealth in particular, formerly the key to women's power and autonomy, has now become a capitalist transaction, and daughters are commodities whose price is to be bargained for (see Parkin, 1972 for a useful analysis of the commoditization of bridewealth). Further, with the commoditization of land, women not only lost use rights, but their rights as lineage sisters were attenuated as well. If husbands became unwilling to share the cash proceeds of the land now registered in their name with their wives, even less would they be willing to accede to the requests of their lineage sisters. There are ideological consequences for gender relations as well. With the weakening of lineage ties and the concomitant strengthening of marriage ties, the sister model for interacting with women has given way to the more subordinate wife model (again, see Sacks, 1979).

The consequent loss of women's power in Africa at both the economic and political level, a dominant theme in the Mitero study, is confirmed by numerous writers (see for example Van Allen, 1972; 1976; Etienne, 1980; Conti, 1979; Oboler 1985; Sacks, 1979; 1982). In Kenya, with the new overarching political authority of the state, the political institutions of precapitalist societies withered. Some place was found for male elders; for example, athamaki often became chiefs and subchiefs in the colonial administration. In Mitero village, male elders of the Mutego lineage preside over the customary judiciary, which operates parallel to, and in conjunction with, the British common law system (See Ghai and McAuslan, 1970 for a discussion of the parallel legal systems).^{*} Women elders hold no political positions, however,

-
- * The fact that precolonial institutions and legal structures have largely disappeared does not mean that Africans have turned their backs on the idea of 'tradition'. Indeed, as I argue regarding my study on 'matega' below, as Glazier (1985), cited above, has shown, and as recent events in Kenya have demonstrated, the idiom of tradition is constantly available to be manipulated by protagonists competing for status, power and resources in society. A court case in Kenya conducted in the first half of 1987, which captured the avid attention of the nation, involved a fight between the Kikuyu widow of an eminent Luo lawyer and his brothers over the burial, following his death in December 1986. The brothers challenged the widow's plans to bury her husband in Nairobi, according to his verbally stated wishes, contesting that he should be buried in his natal western Kenya instead. The decision had serious implications for the inheritance rights of the lawyer's wife of twenty seven

and women in Kenya are largely absent from formal political power. Direct and indirect pressure by church and state against polygyny, and the promotion of the nuclear family have also undermined women's former power base.

At the economic level, the element of sex-gender subsidy remains and has in fact been increased, as in the many cases cited in chapter 3. Women are expected to produce to support their husbands as before, but in addition, they are expected to produce the petty commodity surplus, which their husbands then appropriate. The network of laws and economic practices that characterize the contemporary capitalist state sanction, and in fact require, this appropriation. Two of the most important factors are land consolidation and cash crop marketing organizations. Beginning in the 1950s, land was transferred from lineage ownership to individual male heads of households. Legally, therefore, the product of this land is now the property of the individual husband, although women continue to lay strong claim to their subsistence products and in practice attempt to dispose of them as they see fit. Whether or not they succeed in retaining this control depends on the nature of their individual relationships with their husbands and on their success in participating in the activities of their self-help groups.

Cash crop marketing organizations, such as the Coffee Marketing Board, facilitate the appropriation of the income generated by women's labour. As with other parastatal enterprises, these organizations are oriented toward individual male heads of households. Women therefore carry the burden of production for no wage, under conditions where kinship has been reorganized by the new economic structure into smaller units (i.e. nuclear families). Within these units, their former economic independence and political autonomy is seriously restricted. In the past, even where the muthamaki parlayed his wives' labour into personal influence, he used that influence to enhance the wellbeing of his homestead and lineage, and not for personal material gain. today, the ideology of personal wealth is a primary motive for accumulation -- even if wealth itself is elusive for the peasant. Thus, in many areas of Africa, an exacerbated form of sex-gender domination has become an important element of the general peasant subsidy of commercial production for the world market.

In the light of the double subsidy that peasant women provide, their self-help groups take on a special significance. Rather than being simply organizations for coping with development, which is the overt aim cited by most of them, they are vital organizations for resistance to exploitation. Mitero is a sublocation that corresponds roughly with the territory of the Mutege lineage of the Acera clan, which lies just to the north of the late President Kenyatta's home village. The descendants of Mutege, unlike many Kikuyu on the plains just to the west, were not dispossessed of their land by British settlers. Mutege's descendants engage in petty commodity production

years and their children. Claiming the immutability and sanctity of Luo burial customs, and taking advantage of the silence in Kenyan common law on the subject, the brothers won a legal battle that has established an ominous precedent for the legitimization of both gender and ethnic conflict.

centering on coffee, which they cultivate on a family basis on a scale ranging from a few hundred bushes to plots of several acres. The community continues to engage in subsistence hoe agriculture on reduced acreage, growing maize, potatoes, and beans of various species for their own consumption and cultivating some food crops for cash as well.

While many men habitually leave the sublocation for work, in the typical migration pattern of neocolonial Africa, women represent the more demographically stable component of the community. Women in the area began to come together in the contemporary form of self-help groups in 1966, with the encouragement of community development officers and the Provincial Administration.⁹ The original objective was organization for the utilization of new agricultural inputs, such as fertilizers. While informants stressed that the old style *ndundu* no longer existed, it is clear that the self-help groups are successors to these organizations. The groups perform the traditional functions of cooperative cultivation, *ngwatio*, and cooperative household management for women in childbirth, *matega*. Significantly, these terms now incorporate additional meanings. *Ngwatio* is organized to generate funds for self-help projects, such as a nursery school, water piping, and other amenities directly related to reducing the burden of women's labour, or to community improvement. Funds have also gone to establish small businesses, such as a dressmaking shop. *Matega* continues to provide group help to members -- for weddings and funerals, as well as for childbirth. The term also designates a savings society that collects funds from the sale of surplus food crops and from wage labour on nearby plantations, that provides a lump sum for each woman in turn, with which she may buy a major household requirement, such as a cow, a water tank, or furniture. March and Taquu (1986: 60-65) engage in a general analysis of "rotating credit associations" (as well as rotating labour associations), citing them as a widespread phenomenon among women around the world, but particularly among African women.

Interpreting the activities of Mitero women in terms of the analysis set out earlier suggests, first of all, that by channeling cash from crops into self-help organizations, they were preventing the appropriation of their product by their husbands, and secondly, that they were attempting to accumulate capital as a means of protecting and enhancing their fragile incomes and compensating for lost subsistence production. With regard to the first purpose, women sought to counteract the onerous obligation to generate surplus for their husbands that arose with land consolidation and commodity production. Engagement in wage production on neighbouring coffee plantations, in a manner similar to that reported for Hausa women in the KRP, can be seen as an integral part of this economic strategy. While work on their own coffee bushes yielded good returns, it represented cash for their husbands. Wage work provided meager earnings, but these that could be channelled directly into group funds.

⁹ Eight of the ten women's groups in Mitero were studied during field research in 1974, 1981 and 1985, through in-depth interviews with the groups' leaders and members.

A political economist studying peasants in Africa discusses the struggle within capitalism over the acquisition and distribution of peasant-produced commodities. The resistance of producers may take many forms, such as "refusal to adopt new cultivation practices..., refusal to grow certain crops or cutting back on their production" (Bernstein 1977: 69; see also Cutrufelli 1983: 119-120). The women and technology literature records many instances of just such subversion by women of new technological processes. I suggest that women's choices in disposing of their labour time and channelling their earnings into self-help groups may be seen as a form of the peasant resistance Bernstein describes. Specifically, it is resistance to the appropriation of their product by the international commodity market through the agency of their husbands. As such it is a resistance to dual exploitation, by the sex-gender system on the one hand and by underdeveloped capitalist processes on the other.

Informants in Mitero indicated a considerable struggle over women's labour and earnings. They referred to male control of coffee earnings: "Men drink the coffee money." While coffee was seen as a valuable crop, it involved loss of control of their labour. Vegetable crops for cash sale in the market were preferred. Men's objections to women's appropriation of the products of their own labour were evident in informants' accounts of husbands who beat their wives for participating in the groups. "Men fear women when they are in a group." Overt hostility between men and women points to the dramatic sharpening of sex-gender contradictions in the contemporary era.

A further dimension is added to these contradictions by the fact that women's resistance is taking place under the banner of development ideology. Since independence, the Kenya government has encouraged self-help activity, known as harambee ('pull together'), which has served to supplement state development efforts in the social services. The ideology of harambee is thus a powerful tool for women's assertion of control over their labour and earnings. A number of informants pointed out that men often disapprove of women's business activity and seek to undermine it on countervailing ideological grounds. Such activity has become a major focus of tension in contemporary sex-gender relations; the widespread assimilation of the western ideology of male dominance -- by men, in any event -- has added fuel to the fire. One prominent women's leader recognized the power of this ideology and the need for strategy to counter it:

How does a man exercise power as head of the home? So he has to try all means to suppress women's group activity, to make it not succeed....We try not to be too aggressive, or to break the link with the family and even community....We can't expect to break that myth right away -- it must be gradual. If you want to change it abruptly, you encounter a stronger resistance (Interview, 1981).

It is precisely such practical thinking that leads African women to reject the individualist demands of western feminists. Use of a discourse of family solidarity and welfare is a sophisticated and tactically sound ideological strategy on the part of African feminism.

Thus, while men protest in the name of 'traditional' family values, women cautiously argue for the maintenance of their rights and for the improvement of their economic lot in terms of those same family values; women's independent economic activity is, they say, in the service of children and the home, and progress in this sphere in the modern nation requires new tactics for the fulfillment of their time-honoured tasks. The ideological discourse in sex-gender relations can draw on different elements of precapitalist sex-gender ideology because of the contradictions in this tradition: the ideal of men's dominance over women and of women's primacy in their own realms of authority were held simultaneously. The idea of male dominance is reinforced by Christian and capitalist values, but precapitalist African values regarding women's power in the political economy of the village remain a forceful weapon in the discourse.

There are problems with the manipulation of women's cooperative traditions, both by community, and by individual women themselves. Recent research (Stamp, 1987) has shown that the productive capacity of women's groups may be captured by advantaged women, or by male-dominated institutions within the community such as the church or the political party and diverted to ends incompatible with the goals of the groups (see the summary of this research in the section of women's associations in chapter 5 below). Nevertheless, the groups remain the chief means by which rural women empower themselves politically and economically within the community -- indeed, the efforts at cooptation during the past few years are a measure of this fact.

In conclusion, women's self-help groups have fused precapitalist sex-gender elements -- economic, political and ideological -- with contemporary practices to provide women with a basis for resistance to exploitation, and for countering the negative effects of development programmes. The sex-gender system thus appears as a dynamic aspect of peasant struggle for self-sufficiency in general. If women, through their organized activity, can retain even a part of the income they produce, and can convert new technology to the benefit of their community, the peasantry as a whole is stronger in the face of economic uncertainty and inequity. Given that self-sufficiency is now the major goal African governments are seeking to meet, recognition of and support for the complex ways in which women contribute to self-sufficiency would seem to be a matter of the greatest urgency. It is in the pragmatic strategies of peasant women that grassroots solutions to Africa's development dilemmas reside.

B. Cases in Feminist Political Economy

1. Land Reform and Luo Women's Rights

Achola Pala Okeyo's article, "Daughters of the Lakes and Rivers: Colonization and the Land Rights of Luo Women" is one of two articles on Africa in Etienne and Leacock's important cross-cultural text, Women and

Colonization (1980).¹⁰ A case study of a western Kenyan ethnic group belonging to the Nilotic language family, the work demonstrates the value of a synthesis of anthropological and historical method, and provides a model for feminist research in Africa. Okeyo sets the transformation of Luo gender relations in the context of colonial imperatives, as they evolved in Kenya from the declaration of the East Africa Protectorate in 1895. The chief of these imperatives was that the colony "pay for itself through agriculture": the means by which this was accomplished was the appropriation of African land and the diversion of labour from the autonomous indigenous community to the colonial effort. "The choice to develop the colony by means of agriculture, managed by white settlers exploiting African labor, entailed the disenfranchisement of Africans and the entrenchment of white control over human and natural resources of the area" (187).

Central to the colonial state's agricultural policy was the system of reservations, whereby racial and ethnic groups were segregated on designated lands, the choicest being granted to white settlers. On African reserves, the former owners became "tenants-at-will of the British Crown": the aim of these reserves was to supply a stable labour force for the export sector run by European settlers. In the course of the development of colonial land policy "African culture, tradition, and economic and political institutions were co-opted to aid the administration of political control and economic exploitation" (188), although customary land use patterns were initially allowed to continue.

The focus of Okeyo's analysis is "the impact of the individualization of land tenure on the traditional precolonial landholding unit (the lineage) and on the position of women. Since Luo women play a key role in the rural economy, especially in food production and reproduction, they are a major category of producers whose land rights are bound to be affected by changes in land tenure" (188). As mentioned above, the policy to shift land ownership from the lineage to individual male heads of household began in Kenya in the early 1950s: the reform was part of a late colonial effort to stem African resistance to colonialism by creating a conservative African middle peasantry. Following independence in 1963, the reform was continued as a development strategy. The reform process was slower in Luoland than among the Kikuyu: nevertheless, almost all land was adjudicated, consolidated and registered by 1975, with only 6 percent of women having land registered in their own names (206).

While the Luo, as a Nilotic people of pastoral ancestry, differ from the Bantu-speaking Kikuyu in their historical experience and culture, they shared the lineage-based communal mode of production and the bridewealth sex-gender system described for the Kikuyu. Although Okeyo does not engage in a theoretical investigation of the concept of sex-gender system, the

¹⁰ Achola Pala Okeyo (who formerly published under the name of Achola O. Pala) is a Kenyan social anthropologist. A Research Fellow at the Institute for Development Studies, University of Nairobi, and an international consultant, she has published a number of papers on the status and roles of African women in development.

similarities in the experience of Luo and Kikuyu women with regard to precolonial political economy, and to colonial and postcolonial land reform, validate the generalizations I have made above about sex-gender systems and the position of women, precolonial and postcolonial. Okeyo's study, moreover, provides an exhaustive analysis of the precise means by which women lose their use (usufructory) rights in land during the reform process.

As with the Kikuyu, rights to land amongst the Luo in precolonial times resided with the corporate group, the lineage, rather than the individual; men inherited land from fathers, while women had use rights as daughters or as wives. Land could not be alienated from the group, and equal access for the purpose of subsistence production was a cardinal principle. The usufructory rights of individual men and women were complex and well defined. "For instance, each household has a precise knowledge of where fields, pastures, and homesteads are located and to which their use rights apply" (188).

Okeyo draws three major conclusions in her analysis of the changes wrought by land tenure reform. First, the Luo customary land tenure system is a product of a changing political economy: in the period 1000 to 1400 A.D. ancestors of the Luo lived in southern Sudan, practicing transhumant pastoralism. Under this system, men owned and managed livestock, and women's economic role was marginal. Following migration from the Nile valley 'cradleland' to the west Kenya region in the fifteenth and sixteenth centuries, the Luo settled down and by the eighteenth century had adopted a mixed economy with agriculture predominating (much like the precolonial Kikuyu). This shift in emphasis drew women into the centre of the economy, as is the case in horticultural societies throughout Africa. "During this period the labor of women and children became critical to agriculture, and the rights of women in land became anchored in their role within the lineage as wives and mothers" (208). As well, control of land became important as the now-sedentary population increased. As a consequence, the lineage became a more precise instrument for control of land, and pasture management and water supply as well. "The woman's economic position was enhanced by the fact that the house (*ot*), which is the minimal unit of production and of which she is head, became a major channel for the transmission of agricultural land between male agnates [blood relatives]" (189).

The second conclusion relates to the distortions introduced by colonialism:

The integration of the Luo economy and society into a colonial system had the result of distorting the population-to-land relationships, as well as the structure of the access to land, in a very special way. On one level, the reservation system led to increased demographic pressures on land because it left no option for expansion outside the reserves. Customary tenure adjusted to this artificial population crisis by redefining and restricting the corporate holding of land in such a way that the larger lineage control of land was in some areas reduced to family control. On another level, the reduction of corporate holding also jeopardized women's usufructory rights which had previously benefited from the flexibility and multiplicity of rights in corporate landholding. The trend toward the individualization of land-tenure

reform which was thus set off was further exacerbated by the institution of land-tenure reform which, in effect, negates customary principles of landholding and land use. The reform translates corporate, allocative rights in land (the final authority to dispose of land) into individual male titles to land and creates uncertainty as to the legal status of women's usufructory rights in land (208-209).

Okeyo notes in particular that tensions between men and women with regard to the control of land were exacerbated by both by land-tenure reform and by colonial reservation policy. Regarding the latter, the colonial government demanded space -- usually land alienated from the community -- to build schools, churches, commercial and administrative centers, and roads. Regarding the former, individual male statutory owners in many cases ceased to observe the customary rights of wives and children in the use disposition of what had now become 'their' property.

Her third conclusion has special import for contemporary thinking about agricultural development, technology transfer and the position of women. It has been assumed (if the subject has been thought about at all), that customary use rights can coexist with individualized land tenure. Okeyo challenges this assumption, arguing on the basis of her contemporary empirical research as well as her historical analysis that "customary and statutory rights are different and, in theory, mutually exclusive. It may be predicted that over the next five to ten years [i.e. during the 1980s] the basis and practice of corporate landholding will be eroded and that women as a group will be virtually deprived of their security which had hitherto been protected by the principles of corporate descent and land tenure. In this process the lineage becomes subordinated to the nation-state because the latter assumes authority over resource allocation. By the same logic the house could lose its proprietary control and, therefore, the proprietary link between the mother and son within the house and that of the father and son within the lineage could be severely challenged" (209).

Okeyo's case study provides an analysis of the historical and social factors behind the loss of control and autonomy described in the women and technology and WID literature, and as such, is a model for the methodology required for future research. To take one aspect of the above conclusions: the question of compromised inheritance patterns, and of concomitant insecurity within the family (for men as well as for women) is invisible as a factor influencing family decisions regarding the adoption or rejection of new technology. A more visible and noted aspect of Okeyo's research is the question of legal title. Women's large scale exclusion from statutory title to land in which they have usufructory rights means they have no collateral to obtain loans, a factor widely cited as a barrier to their involvement in development efforts -- as, for example, in the Mwea rice scheme discussed in chapter 3. Why they have the right, and indeed the obligation, to farm land to which they do not hold title is explained in this study. Development planning must take account of this historically created anomaly if local agricultural improvement schemes are to succeed.

2. Women as Food Producers and Suppliers in Zambia

Shimwaayi Muntemba's study in Development Dialogue (1982), "Women as Food Producers and Suppliers in the Twentieth Century: The Case of Zambia," was delivered at the milestone seminar on "Another Development with Women," held in Dakar, Senegal in June 1982.¹¹ Jointly organized by AAWORD and the Dag Hammarskjold Foundation, the seminar's purpose was "to move beyond simple truisms about the situation of women to a more profound analysis of the mechanisms perpetuating the subordination of women in society. The aim of the discussion was, therefore, not to focus exclusively on women but to look both into male-female relationships in society and into how the system of economic organization affects these relationships" (Development Dialogue, 1982: 7).

Muntemba's study was a valuable contribution towards this purpose. Applying a rigorous historical methodology and a broad knowledge of research and action on women's concerns in Africa, she succeeded both in delineating the outlines of an African feminist political economy, and in providing a model for an empirical case study within the framework. Her analysis complements Okeyo's, coming to many of the same conclusions regarding gender relations, land rights and production, but focussing on a different aspect of the feminist political economy effort. Her analysis is similarly useful in providing a framework within which the problems identified by the WID literature may be understood and more fruitfully tackled. As a historian, she is concerned with a thorough exposition of the policies and practices of the colonial and postcolonial state as they have broadly affected gender relations in all Zambian ethnic groups, rather than with an exploration of the detailed consequences of changing gender relations within one particular group, as is Okeyo's more anthropologically oriented project.

While Okeyo implicitly challenges traditional anthropological understanding of women's position in lineage-based societies, Muntemba tackles one of the more recent social science trends in Africa: peasant studies. The plethora of research and debate on the subject during the 1970s was a valuable corrective to earlier neglect of internal socio-economic structures in Africa, Muntemba faults peasant studies, however, for their neglect of women in production.

Most works conceive of the peasant as a male and use the male gender. They also largely deal with issues affecting male peasants: cash crops, marketing, agricultural education, mechanization. Even such important questions as land dislocations, migration and social stratification, which affect women most poignantly, are analysed in relation to male peasants (Muntemba, 1982: 29).

¹¹ Shimwaayi Muntemba is a Senior Lecturer in and former Chairperson of the History Department at the University of Zambia. She has conducted extensive research on the Zambian peasantry, with a focus on peasant women. She has conducted development research for several international organizations, including the ILO.

Three themes frame Muntemba's enquiry: land, labour and the sexual division of labour. She develops these themes first in a general African context, and then in the context of Zambia's concrete historical experience. Starting with the premise that women, the primary producers and suppliers of food, have suffered a deterioration over time in their ability to carry out these responsibilities, she examines their position in terms of the social relations of production, distribution and surplus appropriation.

Control over, and access to, the physical means of production -- land or fertile soils, communications, transport; and the productive forces -- human labour, implements and inputs, coupled with more efficient methods, ensure labour's productivity. But that is not enough. To ensure non-appropriation and fair distribution there has to be control over one's own labour and the product of that labour. At every reconstructible period in history there has been a struggle over these factors at household, village, national and international levels. How women fared in this struggle influenced their ability to produce and supply food.

Evidence suggests that although this struggle may have existed in pre-colonial times, it was not until the penetration of capitalism and the money economy that the position of women was most markedly and devastatingly challenged. Then, the struggle heightened at every level (30).

Muntemba surveys this struggle throughout Africa, citing the alienation of land to mining and agricultural companies and to settlers; land shortages and landlessness for peasants resulting from intense peasant cash crop production (with constraints upon food-producing land in particular); the struggle over labour as males were drawn or forced away into work for colonial enterprises, or as competition mounted within households for labour to grow cash crops instead of food; and a shift in the sexual division of labour, whereby women on the one hand experienced a dramatic increase in their workload as they took on men's tasks and tended the cash crops, while on the other hand they suffered a decline in control over their own labour.

Using the Zambian case to substantiate her generalizations (and in doing so, confirming the conclusions of the Mitero and Luo studies as well), she divides the country's history into four stages: precolonial; the colonial period from 1900 to the end of World War II; 1946 to independence; and the neocolonial era from 1964-1981. In discussing precolonial Zambia, she draws on anthropological as well as historical evidence to delineate the sex-gender system and mode of production of the predominantly matrilineal societies of the region. While male control of women did exist in matrilineal societies (fathers and brothers rather than husbands exercising this control), inheritance of land through the female line did ensure direct access to land for women, and in practice women exercised considerable control over their own agricultural production. Muntemba describes the complex division of labour between men and women, emphasizing the importance of women's gathering of wild foods in poor seasons, or when powerful chiefs raided or demanded tribute (gathered foods provided "relishes" which, despite the connotation of this word in English, provided vital nutrients to complement the substantially carbohydrate diet).

The structure of a mining and settler colony was laid down in the colonial period to 1945. Women's position, and hence their role as food producers, differed according to the local experience regarding colonial incursion. In the more densely settled and fertile south-central portions of the country men remained on the land but Africans experienced an intense struggle over land. It was here that the colonialists concentrated their communication and urban centres and appropriated land for their own use. A formal land policy was enacted in 1924, when the Colonial Office took over from the British South Africa Company and set up a formal colonial administration. As in Kenya, the territory was divided into Native Reserves and Crown Lands (the latter being for towns, mines and white settlement, existing or anticipated). Africans were forced to move to the reserves, which were often on poorer land and which became severely overcrowded. This was a major factor in undermining communities' abilities to produce food, a problem exacerbated by the pressure to supply food to the mine workers.

Women's position as food producers was compromised by land dispossession in the south-central agricultural region; in the rest of the country, however, it was male migration to serve in the mines that had the sharpest impact on women's production. Most of the agricultural tasks formerly performed by men, now fell to women. Some of them could no longer be performed, such as the lopping and felling of trees, and the land rotation required by the poor soils of the region. As a consequence, women were forced to overcrop, which, combined with their inability to fertilize as before, led to serious deterioration of the land in later years. Muntemba's meticulous investigation of the factors involved in deteriorating food production demonstrates the importance of understanding all the elements in a system of production, including the seemingly mundane:

The men's contribution to scaring birds and harvesting was important because, although these tasks could be, and were undertaken by women, both were undertaken in the morning and evening. At the latter time, women's labour was also required for food preparation. During the dry months, relishes were not plentiful and women had to cover huge distances to fetch them. The heavier burden which started to fall on them sometimes resulted in their getting too tired by the end of the day to prepare the major and, in some cases, only meal of the day. As agricultural production became too onerous, women started to rely more heavily on gathering. Paradoxically, on account of the increasing burden, some found it difficult to supplement their agricultural shortfalls through gathering. In an already precarious agricultural system, villagers experienced actual hunger during the three dry months, the 'hunger months'....Another development, which became accentuated later with urbanization, was that as their agricultural burden grew, in some instances they started to shift to less onerous but also less nutritious foods such as cassava (40-41).¹²

¹² MacKenzie (1986) gives a similar explanation for the shift from millet to less nutritious maize amongst the Kikuyu. Maize has replaced other grains throughout much of Africa, and the change has

In the subsequent sections of the article, Muntemba engages in similar detail regarding changes in land, labour and the sexual division of labour. The period between World War II and independence was characterized by an intensification of commodity production and the entrenchment of a huge urban labour pool, requiring the support of rural production. Men's control of the purchase and use of new technology introduced to increase farm productivity ensured that women's subsistence food production lost out in the competition within households over the allocation of labour. Moreover, such food for the family as they were able to grow was not sacrosanct: "Some women informed me that direct or indirect pressure was brought on them to sell women's crops such as groundnuts and vegetables. This was particularly the case if implements [bought by men] were used in the fields" (43). As well, the question of inheritance is again shown to be a factor. Because men owned the implements, their agnatic relatives rather than their wives inherited them, even though it was the wives' labour that had generated the income to purchase them in the first place. As a consequence, the stability of the rural food supply, particularly in the families of older women, was always under threat.

On independence, the new government initially committed itself to 'rural development', but as the price of copper started to decline on the world market in the 1970s, even more pressure was placed on agriculture to contribute to the cash economy, in order to make up the shortfall in foreign exchange. Peasants were exhorted to grow cotton, sunflower and tobacco, as well as groundnuts for oil and maize to feed the urban population. While settler land was returned to peasant production in some cases, this did little to relieve the mounting pressure on land. In agricultural development schemes, men rather than women were targeted. As women asked to analyze their position put it: "'the government has forgotten us'" (46). Precisely because it controlled distribution and was the agent for increased productivity, the government was the target of women's blame: "in their view the state systematically operated against them" (46). Women's strategy, in response, was to reduce production in order not to have a surplus for appropriation (although this could backfire if food was extracted anyway in hard times). Said two co-wives: "'Our household production has been deteriorating over the last five years. How can it not when we, the women, have decided to work as little as possible?'" (47).

Muntemba concludes with the question: what happens when women's capacity to produce and supply food is compromised in nations still dependent on peasant production?

Control by women of land, of the productive forces, of their labour and the product of that labour must be viewed as the most urgent priority. Thus land reforms and schemes resulting in privatization as the means of bolstering small-scale production must be challenged: they do not take women into consideration. It is imperative to consider women not because they are women but because, as we hope we have shown, they are central to

been neglected as a serious cause of undernutrition in the continent.

food strategies. Instead, socialized forms of land systems in which all producers have usufructory rights must be fostered. But this is not enough. Peasant women have to participate in the political machinery to assure equitable distribution of the productive forces and non-appropriation of food from them. Women must be conscientized to challenge the sexual division of labour which subjects their labour to men....But the forces at national and international levels are so strong that, alone, women cannot succeed and through this success move toward alleviating some of the food problems bedeviling many African countries (48).

Muntemba, like Okeyo, has analysed a circumstance widely described in the literature: in this case, the decline in women's food producing capacity. As a consequence, she has delineated the problem and suggested solutions that go far beyond the technical and individual-oriented panaceas promoted by much of the development establishment. While some might consider that 'socialized forms of land systems' are not politically feasible or economically desirable in most African countries, the issues of use rights, political participation, and women's loss of control over their own labour emerge as vital issues to be tackled at the level of the nation and the community. Development efforts in each African country, including practical research on technology transfer, require as their groundwork the kind of rigorous historical and socio-economic analysis demonstrated here.

PART III

NEW APPROACHES

CHAPTER 5

NEW ISSUES IN TECHNOLOGY, GENDER AND DEVELOPMENT

In the foregoing survey of conceptual frameworks, and of findings regarding technology, gender and development, I have implied a number of issues which bear further investigation. This chapter organizes these issues into categories for consideration, and indicates some interrelationships that the literature, and development policy, have not addressed.

The most telling issue to emerge from the survey and findings is that there are serious problems with the conceptualization of development, and of appropriate paths to its achievement in the Third World. Almost all the WID literature that recognizes the flaws of 'developmentalism' attributes the flaws in thinking to inadequate attention to women and gender relations. This is certainly true: any vision of human progress that is premised on ancillary, dependent status for half of humanity is bound to be epistemologically paralysed. Yet the converse view of developmentalism's flaws has not been put forward: as long as faulty conceptualization of economic and political processes in the Third World prevail, whereby relations of dependency are ignored, and falsely conceived 'tradition' is viewed as the obstacle to 'modernization', there is no theoretical space into which to insert an understanding of women and gender relations. In other words, fruitful new approaches to technology, gender and development depend upon clearer thinking about political economy in general. In particular, the ideological biases and political interests inherent in much development thinking must be recognized.

It would be unrealistic to expect donor countries to abandon their political interests, but it is reasonable to require that they be clear about the consequences of their policies for Third World societies, and that damaging development aid programmes are not justified through a process of mystification. The stark reality is that 'development', as commonly construed in the west, has meant underdevelopment for women -- and as a consequence, often for children and communities as well. Without denying the benefits of many aspects of technology transfer in the fields of health, nutrition and agriculture, I would argue that the worsening of quality of life for African women, economically, socially, and often physically, is an indictment of western attitudes and actions towards Africa that cannot be overlooked. The culpability of African governments as well poses serious dilemmas for the protocol of donor non-involvement in national political affairs. Given that much aid unwittingly supports negative political practices, aid givers must recognize the uncomfortable fact that non-involvement is a political stance, and needs examining as such.

My call for clarity about technology, gender and development in Africa is given a concrete form in the following six categories, which organize the new issues and interrelationships I have identified.

1. A synthesis between feminist political economy and the WID approach, to overcome the limitations of each, will generate a powerful research tool for investigating on the one hand the precise ways in which technology

disadvantages local communities, and on the other hand the ways in which communities are sometimes able, in spite of the liabilities of dependency, to turn new technologies to their advantage. Identifying the success stories, and the reasons for that success, will lay the ground work for replicating positive experiences with new technology.

Identifying the reasons for negative results will make possible a more critical assessment of current technology transfer schemes, so that past mistakes may be avoided in future.

2. To make the above endeavour possible, a more rigorous theorization of community structures and processes, and in particular, the relations between village organizations and sex-gender systems, is needed. An important part of this investigation will be research into relations among women; women have tended to be treated as a homogeneous group in the literature, but there are indications that serious contradictions exist between categories of women. Realistic development planning must take account of the impact of these contradictions upon research priorities, policy-making and implementation.
3. An aspect of more rigorous enquiry into gender and power in the village and family is the identification of certain conceptual problems in the literature. Each of the following has been the subject of debate in one part or another of the cross-cultural or feminist scholarly traditions: (a) the public/private dichotomy; (b) the nature of the 'family' and the 'domestic realm'; (c) the economic as the determining factor in society; (d) the nature of 'the traditional' in society. Misconceptions about all of these are embedded in the literature, particularly in WID writing, and these misconceptions have had negative consequences for development policy making. (e) Inherent in all four conceptual problems is an epistemological dilemma that remains almost invisible in the literature: the subjugation of local 'knowledges' to a dominant western 'knowledge' about Africa -- and about African women in particular. Flawed development policies can only be corrected if the flawed nature of our knowledge is addressed.
4. Certain foci of societal transformation have been neglected, both in the feminist political economy and the WID literature. Effective development policy depends upon a clearer understanding of these factors: (a) women's rights, political and economic; (b) the role of the media -- traditional as well as modern --- in disseminating appropriate new technology; (c) social dimensions to women's participation in family health care and nutrition; (d) the logic of traditional technology, social and physical, and indigenous technological innovation; (e) the conscientization of men: how sexist bias and practice at the level of nation and village may be overcome.
5. The boundary problem in research and policy has prevented the diffusion of insights and information between research/action loci, and even between branches of a given locus, such as within an aid agency. The most brilliant understanding of issues concerning technology, gender and development will have no impact upon Third World societies unless ways are found to overcome the boundary problem.

6. Who does the research? Is it as straightforward as insisting that only African women -- and any African women -- are capable of generating valid analyses of technology, gender and development in Africa? Africa is unique as a region of the world, in that the major portion of knowledge about its peoples and societies has been -- and continues to be -- generated by outsiders. For Africa, therefore, more than for any other region of the Third World, the issue of who does research is politically sensitive and methodologically complicated. African researchers themselves are beginning to address this question.

The task of addressing these new issues and interrelationships is the work of future research; some practical guidelines for this task are given in the final chapter. Here, a few points will be made with regard to each, with illustrations where appropriate, to demonstrate the importance of the questions raised.

1. Towards a new synthesis in the study of gender, technology and development in Africa

A requirement of a good study is fieldwork that goes beyond describing women's declining power and increasing workload -- as much of the WID literature does, and that does more than document statistics on health and nutrition correlated with women's status -- as much of the social medical literature does. Essential is the investigation of sex-gender systems and women's groups, and an attempt to record, through oral history and other means, changes from the past to the present. Meanwhile, political economists should be prepared to apply their theoretical insights to concrete contemporary development issues. Two examples of a synthesis of WID and feminist political economy concerns are cited to demonstrate the value of this approach.

The first is a concrete case study. Balghis Badri's study of "Women, Land Ownership and Development in the Sudan" (1986) is not only important as an example of synthesis, but because it also focusses on a category of African women that has tended to be neglected in the literature: pastoral women. Much is made in the WID and political economy literature of the connection between agricultural women's production and their concomitant rights and autonomy; pastoral women have been characterised as having a low position by comparison, in that they are believed to have had little control over the major means of production: livestock. Traditionally, men indeed 'owned' livestock, though the Western concept of ownership does not apply, given the complex communal web of rights and obligations in livestock, and the practice of placing animals in age mates and relatives' herds.

Once again, however, western bias has focussed (rather romantically, as endless television shows about the Maasai attest) on the connection between men and cattle, and the substantial stake women held in livestock has been overlooked. Recent studies (for example, Kettel, 1986) show, however, that the difference between the status of pastoral and horticultural women was less marked than has been thought. Evidence is emerging that pastoral women indeed have age grade associations, like their menfolk, in spite of the absence of

reference to these in the anthropological literature. Llewelyn-Davies records the bases of solidarity among Maasai women (1979). Badri, a sociologist teaching at the University of Khartoum, has conducted research, and has drawn on the fieldwork of several University of Khartoum dissertations, to generate an analysis that demonstrates the importance of women's rights in livestock. Her study shows how contemporary neglect of women's collective economic contribution through dairying has had serious consequences for Sudan's food self-sufficiency.

The first part of Badri's work deals with two cases involving agricultural communities, and documents the connection between loss of rights in land and control over labour, and women's exclusion from the development process. The second part deals with a study conducted amongst pastoral women. Badri asserts that "this case shows how planners' assumptions that women's domain is primarily private has an adverse effect on development" (90). There are 55 million head of livestock in Sudan, and the country is self-sufficient in meat, with a considerable surplus to export, representing nearly 13 percent of export earnings. Men are chiefly responsible for the herding of livestock, moving with them in search of pasture and water. Women are responsible for milking, milk processing, and marketing of dairy products. Given the potential of the dairy industry in Sudan, both for domestic consumption and for export, it is surprising to discover that 11 million Sudanese pounds are spent annually on importing milk powder and other dairy products. Badri sees the problem lying in the government's neglect of the dairy industry -- a business monopolized by women, based on their traditional use rights in livestock (in a manner parallel to horticultural women's use rights in land owned by the patrilineage).

I think that if policy makers had concentrated their efforts on helping women to construct woman-run dairy farms and on introducing only appropriate technology for milk processing, a better situation could have been achieved. However, the government policy makers attempted to solve the problem of milk shortage by importing milk and giving licenses to big companies to invest....Women's traditional work is being taken from them as these companies introduce advanced technologies which women do not know how to use. Any expansion along these lines means a loss to women. The present situation of starvation compels us to take more notice of nomads in general and nomadic women in particular. Instead of introducing handicraft projects to nomadic women...our priority should be given to milk in order to save ourselves millions of pounds annually and to better the situation of women -- whom we should consider not as belonging to the private [realm], but as part and parcel of development plans (90).

Badri's study sets the agenda for synthesizing, development-oriented research on dairying technology Sudan.

The second example demonstrating the value of the synthesis proposed is Beneria and Sen's excellent review article assessing Ester Boserup's (1970) contribution to women and development: "Accumulation, Reproduction and Women's Role in Economic Development: Boserup Revisited." (I agree with their assessment that "probably no single work on the subject of women and

development has been quoted as often" - 141). I do not wish to engage in yet another round of Boserup-assessing by reporting their critique: rather, their overview of the issue of population control and birth control -- one intimately tied with health technology transfer -- is worth summarizing. Their conclusions are particularly relevant to Africa, where governments are facing increasing pressure to tackle the stupefying birth rate.

Beneria and Sen's pragmatic assessment of population control and birth control policies and practices is grounded in a wealth of feminist political economy literature. They argue (154-156) that while issues of (biological) reproductive freedom were openly pursued in the west during the 1970s, in the Third World the issue was much less clear. Complicated by the question of overpopulation, and by resistance to western-imposed values and schemes for population control, the question of reproductive freedom has not been directly addressed in literature on the Third World. Beneria and Sen assert that feminist analysis must modify conventional approaches to population control and birth control. In the course of their discussion, they raise the question of women's rights: the right to bear or not to bear children, and to space childbearing. But decisions about childbearing affect not only the woman: they affect her household, and the class interests of her community as well (even the propertied classes who depend on the reproduction of labour have a stake in decisions about peasants' birth control). In particular, the social strategies of her own peasant class place powerful constraints on her choices.

For example, in very poor peasant households that possess little land and that are squeezed by usury and rent payments, the labor of children both on and off the peasant farm may be crucial to the ongoing ability of the household to subsist and maintain land. Pronatalist tendencies in rural areas may have a clear economic basis (155).

After surveying the economic analyses, both neoclassical and Marxist, that point out the conflict between economic rationality and social goals, the authors move on to discuss the impact of both community norms, and imposed policies, upon women. Their summary assessment is succinct and worth quoting at length:

While leftists have correctly opposed forced sterilization and have pointed to the social causes of unemployment -- the real population problem -- there has been a tendency to ignore a critical aspect of childbearing: it is performed by women....In conditions of severe poverty and malnutrition where women are also overworked, this can and does take a heavy toll on the mother's health and well-being. The poor peasant household may survive off the continuous pregnancy and ill-health of the mother, which are exacerbated by high infant mortality. The mother's class interests and her responsibilities as a woman come into severe conflict.

The result of this conflict is that a poor woman's attitude toward birth control, contraception, and even sterilization are likely to be different from those of her husband or mother-in-law. Research on these problems in the Third World should address questions such as: (1) Who makes 'decisions about childbearing and birth control within rural households,

families, and communities, and on what basis are the decisions made? (2) What indigenous forms of family limitation are available to poor women, and how are they used? (3) Are there differences of opinion and interest between the childbearers and other family members? (4) How does childbearing affect women's participation in other activities?

Answers to these questions require careful empirical research of a sort that is barely beginning in the Third World. The insights gained from empirical research must affect one's assessment of birth-control programs, especially the more enlightened programs that focus on the health and education of the mother. Reduction in the infant-mortality rate, improvements in health and sanitation, and better midwife and paramedic facilities can give poor, rural women more options than having to resolve class contradictions through their own bodies. Such programs, however, clearly cannot be a panacea for the basic problems of extreme poverty and inequality in landholding; the contradictions of class and capital accumulation in the countryside can be resolved only through systemic social change (155-156).

Underpinning this analysis is a sophisticated understanding of the contradictions inherent in contemporary sex-gender systems, as well as of class contradictions. Neither have they lost sight of the heart of feminist concern: the wellbeing, rights and autonomy of individual women. Their list of research questions provides a ready agenda for research by health technology planners in Africa.

2. Researching the community: women's associations and sex-gender systems

I have set out a model in chapter 4 for the concerns that researchers may fruitfully address in order to create an understanding of the interrelation between sex-gender systems and communities. Other studies, such as Sacks (1979: 1982) and Mackenzie (1986) have engaged in a similar exercise. The Win Document (Women in Nigeria, 1985a: 94-107) identifies women's associations and networks as focal points for social and economic transformation, which should receive the concerted attention of researchers and aid donors. The influence of community organizations, including women's organizations, upon the introduction and sustained use of new technology is almost entirely uncharted territory, however. On the other hand, studies on technology transfer mention women's organizations only in passing. Cooperatives, which are one type of organization that receives some attention, are usually discussed in terms of the impact of technology upon the organization rather than vice versa. An exception is Patricia Ladipo's study of two Yoruba women's cooperatives, in which she determined that cooperatives attempting to adhere to government guidelines do not succeed as well as groups which create their own rules. "Cohesion, personal development, and financial growth were found to be greater in the self-regulating group" (1981: 123). While a few other studies mention the importance of women's contribution to decision-making, Ladipo's study is exemplary in the context it sets for understanding successful adoption and adaptation in one case, and failure in the other.

In 1976, women sought to overcome their disadvantage in cash crop production by approaching the government to be included in the Isoya Rural

Development Project, founded in 1969. The project gave access to training in agriculture, to technology, to adult literacy, to home economics programmes, and later to new cash crops, particularly yellow maize. In a familiar fashion, however, women had been relegated to the 'welfare' aspects of the programme. In requesting inclusion in the economic aspects, they argued that "as a bird uses two wings to fly, so must a family use the progress of its husband and wife to get ahead" (124). The organizations being promoted by the Project were multi-purpose cooperatives, designed to facilitate agricultural extension efforts, the introduction of new technology, and the distribution of credit. The first women's cooperative to constitute itself, Irewolu, attempted to meet the guidelines set by government policy and regulations. By the time the second group, which named itself Ifelodun, decided to organize, the first had failed to live up to the guidelines set. As a consequence, the second group was allowed to formulate its own, more appropriate set of rules. "Thus, an experiment was begun wherein there were two groups trying to reach the same goal of government recognition by different means" (125).

Ladipo's discussion of the different experiences of these two groups is intricate and intriguing. It is impossible to convey the richness of the analysis here. The following summary, however, places her findings in the context of the synthesizing framework I have developed in this monograph. In an initial assessment of her findings I would assert that the prognosis, according to developmentalist criteria, would have been for greater success for the first group, Irewolu. It was a larger group, it followed government guidelines, and its membership was younger. It selected a leader who was "literate and well travelled and had a keen sense of the events which were modernising the country" (127). The group gave itself the name, "Good Things Come to Town." From the feminist political economy perspective, however, it was no contest. The Ifelodun members, being of an older generation, had more experience with other organizations, such as "religious groups, trade associations, savings societies, and associations of household (lineage) wives" (126). The literacy rate was slightly higher among the older women, surprisingly. Being freer of responsibility for small children, and having had the opportunity to build enterprises, the older group had a higher proportion of produce buyers and were generally more prosperous, while the majority of Irewolu members were petty traders.

The pattern of wage work, identified by myself for the Kikuyu and Jackson for the Hausa in the KRP, applied to the women of the Ifelodun group. Given the evidence from these studies, it is likely that Ifelodun members employed the strategy of pooling their income from agricultural labour in the group enterprise. Half worked as agricultural labourers, while none of the Irewolu membership did. Further, 20 percent of the former group prepared meals for sale, while only 3 percent of the latter group engaged in this enterprise. Finally, more members of Ifelodun secure title to land, which served them as a source of income.

Ifelodun's president was a seemingly more passive woman than the Irewolu president:

She had never learned to read or write, rarely left the village, and never voiced an awareness of any event outside her own community. She

practiced her religion, Islam, within her home. She was rarely seen to exercise any influence on the conduct of meetings, but it was apparent that she had considerable authority, probably stemming from her role as the village's traditional midwife. It seems she was elected to ensure harmony and stability to a group whose name can be translated as "Friendship is Sweet" (127)¹

Ladipo identifies other factors important to her conclusions including the fact that Ifelodun was allowed to restrict its membership to its own village (Irewolu membership was drawn from six villages), and to withdraw its savings in the 'hungry season'. Ifelodun members were lineage wives, and, I would add, were organized as age mates. Irewolu members, on the other hand, were prevented from organizing along such traditional community lines. They wished to divide amicably into three groups, six villages being too dispersed a community for successful group effort. Further, they resented the domination of Isoya town in the group's affairs. However, their husbands prevented the group members from carrying out this decentralization, especially the men of Isoya, who wished to retain the prestige of its leadership. The above description is almost a casebook of how to, and how not to organize for development. Because the Ifelodun women were the decision-makers, they turned to the skills and practices that had worked for them, and for their grandmothers, in other associative contexts. The elements of traditional sex-gender system and women's associative structure and practice adapted to the modern context to make possible the successful adoption of new technology, farm methods and materials, and the use of credit to expand their economic activities. While the Irewolu women were socially and economically less equipped to handle the communal effort, they nevertheless had a sense as to what would work organizationally. But they were prevented from making the necessary structural changes. Policy that aims to draw women into cooperatives for the purpose of rural development needs to be based upon this kind of community-specific, sophisticated analysis of community and gender, and to recognize the necessity of giving decision-making powers to the village women themselves..

The problems of mistrust in the collaboration among Irewolu members that Ladipo identifies, suggest contradictions in relations among women that she touches on but does not explore. Neither does she discuss contradictions within Ifelodun. Such contradictions inevitably exist, and may undermine self-help efforts, however. Mbilinyi (1984: 294) expresses concern about the lack of attention to differences between women. Wealthier peasant women are in a position to hire labourers: these are usually other women. Yet few studies focus on this group, their working conditions and their family life. however. The same problem applies to the treatment in WID literature of entrepreneurs. The liberal approach is concerned with obstacles to these women's success, rather than with the ways in which they exploit other women.

¹ A slogan women's self-help groups across Africa would approve of -- focussing as it does on the prerequisite for group effort. The younger women's "Good Things Come to Town" is revealing, by contrast, of a more 'modernist' approach. How are the good things to come, if not by "sweet friendship"?

Mbilinyi sets out a research agenda for the consideration of such class contradictions among women.

In a recent paper entitled "Matega: Manipulating Women's Cooperative Traditions for Material and Social Gain in Kenya",² that carries forward my analysis of Mitero women's self-help groups, I explore these contradictions in terms of ideological discourse among the village women. The study seeks to demonstrate how women's egalitarian ideal of shared resources is sometimes violated in practice. Matega, in both its traditional and modern meanings, is a powerful word in the Kikuyu lexicon: it stands for the ideology and practice of sharing among women. As explained in chapter 4, matega in the past stood for women's aid to women at childbirth. From collecting firewood, to tending her children and fields, village wives would rally round each childbearing woman in turn. In keeping with the spirit of modern development, Matega has taken on a new meaning in the present. It designates the savings activity of village women's self-help groups. The communal savings account, in addition to funding community projects such as primary schools, is intended to contribute a lump sum to each woman in turn: With this, she is able to buy an otherwise financially inaccessible household improvement.

Recent research in Mitero indicates that individual enterprising women enhance their material well-being and their prestige by exploiting the tradition of matega, receiving a disproportionate share of the group savings, and possibly diverting for their own use resources intended for community development projects. Yet it is precisely these women who have played the greatest role in creating the modern idiom of cooperation.³ But matega is not only coopted by individuals: certain male-dominated rural institutions are manipulating the concept for their benefit as well. The Catholic church holds regular matega to raise funds; the Catholic women's self-help group has been absorbed into the church structure and women no longer practise typical group functions, devoting their energies to fundraising according to the leadership's instructions instead. The local administration used the women's groups to fund events and projects of its devising, as well as weddings: "for

² Delivered at the Annual Conference of the Canadian Association of African Studies, Edmonton, Alberta, May 1987; and at the Third International Interdisciplinary Congress on Women, Dublin, July 1987.

³ Several Kenyan informants indicated in 1987 that urban elite women have adopted the practice of matega as well, holding parties at which guests are expected to contribute substantial sums of money to their hostess (in upper circles, \$75 would be considered miserly and a blow to the guest's social standing, according to one informant). A recent report from Chad indicates a similar process at work amongst the elite women of Ndjamena, where the pari vente ("a gamble to sell") has become an important substitute for an inefficient banking system, and where popular or influential women gain unfair advantage (Globe and Mail, May 25, 1987). It appears that the traditional credit club system found in many parts of Africa, of which matega is an example, is everywhere facing manipulative pressures of the kind identified in the Mitero study.

every one of these functions the group is told how much money it will contribute." The resource-generating power of matega has not been lost on the village men, some of whom have pushed their way into group membership. Finally, the district-wide umbrella organizations of the women's self-help groups have engaged in a massive transfer of group capital from the countryside to nearby cities, in the form of investment in urban rental buildings. The research charts the mismanagement and even embezzlement of the groups' funds, and the lack of return on women's matega activities.

In its focus on the ways in which the "common language of custom" is used to subvert the self-help groups' goals, the study draws important insights from David Parkin's (1972) monograph on economic change among the Giriama of coastal Kenya, and from Jack Glazier's (1985) work on the uses of tradition regarding land acquisition among the Mbeere of central Kenya. As well, it draws on the growing body of literature on gender relations in East Africa, and on certain concepts from theory on discourse and ideology. The study aims to contribute to the theoretical understanding of ideological discourse in contemporary African society; I hope, as well, that it will join useful works such as Ladipo's to increase understanding of the problems as well as the opportunities provided by women's self-help activity.

3. Conceptual Problems

a) The public/private dichotomy.

A component of most conceptual frameworks for the consideration of women in the development process is the identification of a 'public' and a 'private' social sphere, respectively the domain of men and of women. The assumption of the reality of this division is the premise upon which are based the 'welfare' approach and the emphasis on 'income generation' to the neglect of women's productive role, discussed in chapter 4. The division is also a powerful component of sexist ideology and policy. Few liberal studies, including most WID literature, challenge the dichotomy, however (Rosaldo, in her influential text book coedited with Lamphere [Rosaldo and Lamphere, 1974: 36] exemplifies the theorization based upon the concept of public/private). Many argue that the solution to women's disadvantage vis-a-vis development programmes is a more active role in the 'public' sphere; or alternately, a better recognition of the potential contribution of the 'private' sphere. That the dichotomy itself is an inaccurate conceptualization of present African life, and even more so for the past, needs asserting in the strongest possible terms.

The feminist political economy literature has documented in many studies the porous boundary between what is kept from general view -- the 'private' -- and what is out in the open for all members of the community to see. While women's world is indeed separate from men's, marked by a sexual division of labour and by gender-specific ideological discourse, it is far from private, in the sense we have come to understand it in our western experience (where indeed, a private world of the home is supported by law, residential patterns

and political practice).⁴ The community of women is as full a participant in the decision-making structure of village life as that of men.

Even in Muslim societies which practice the seclusion of women, and where women may be analysed as a "muted group" which is relatively silent on its concerns, compared to men (Ardener, 1974: vii-xxiii, cited in Callaway, 1984: 430), women are able to carry out an active community life. Indeed, "the 'muted group' construct implies that the seeds for total independence exist within the women's experience of total suppression." Under conditions that to a westerner may appear unbearable, the value system of a separate world for women, within which women are fully autonomous and active social agents, "stimulates and sanctions an assertiveness which could ultimately be the foundation for political efficacy" (Callaway, 1984: 430-31). It is precisely upon such ideological and structural foundations that it was possible for the Hausa women in the Kano River Project to mount a strike for higher wages -- the success of which was a good example of political efficacy.

For the great majority of African women who are not secluded on religious grounds, the distinction between a public and private world is even less valid. Wipper (1982); Van Allen (1976); Mackenzie (1986); and Mbilinyi (1986) are among the number of scholars who have documented women's resistance movements during the colonial era. They thereby have demonstrated women's ability to mobilize for political action. The importance of such action in colonial history has, outside such studies as these, remained invisible however, as Mbilinyi (1986) points out.

In the present, while women are largely absent from national and 'formal' political institutions, their political efficacy continues to be manifested at the level of the community. As all the detailed work on women's organizations reveals, and as substantiated in an important new work on women's associations by March and Taquu (1986), women's communal organization is one of the most vibrant and effective institutions at the local level. Given that the 'formal' juridical and political institutions imposed by colonialism upon Africa are weak, 'informal' structures have a local legitimacy that sanctions their decision-making authority in the community. March and Taquu analyse the reasons for the emergence of rational-legal authority (Max Weber's term) which led to the formation of the large-scale polity known as the state. It is this form of polity which was imposed on the precapitalist, small-scale African societies by colonial conquest.

⁴ Feminist theory has dealt extensively with the public/private dichotomy. See Jaggar (1983) for an overview of the history of the concept. Armstrong (1978) argues that an explanation for the growth of a public/private distinction lies in the growth of the state, and in women's declining ability to control and distribute resources: features characteristic of western society and of African nations today, but not of African society in the past. Even in the present, under the adverse conditions described in this monograph, women retain a measure of control over the distribution of resources that has not characterized western society for centuries.

Perhaps because jural-political authority superseded other kinds of authority in our own history, it has largely superseded them in our thinking as well. The historically specific, political-jural form of authority that evolved in the west appears to have come, by itself, to signify the total concept of 'legitimate' authority. From this perspective, formal associations appear legitimate because they are empowered by rational jural-political charters. The fact that informal associations do not have such charters, however, neither makes them illegitimate nor excludes them from political processes. Public acceptance and sanction, not charters, constitute the primary basis for authority (2).

March and Taqqu attribution confusion over legitimacy to "failure to distinguish between several meanings of the word 'public'". The summary by Van Allen (1976: 64) that they use to clarify these meanings is worth repeating:

One notion of 'public' relates it to issues that are of concern to the whole community; ends served by 'political functions' are beneficial to the community as a whole. Although different individuals or groups may seek different resolutions of problems or disputes, the 'political' can nevertheless be seen as encompassing all those human concerns and problems that are common to all members of the community, or at least to large numbers of them. 'Political' problems are shared problems that are appropriately dealt with through group action -- their resolutions are collective, not individual. This separates them from 'purely personal' problems.

The second notion of 'public' is that which is distinguished from 'secret', that is, open to everyone's view, accessible to all members of the community. The settling of questions that concern the welfare of the community in a 'public' way necessitates the sharing of 'political knowledge' -- the knowledge needed for participation in political discussion and decision. A system in which public policy is made publicly and the relevant knowledge is shared widely contrasts sharply with those systems in which a privileged few possess the relevant knowledge -- whether priestly mysteries or bureaucratic expertise -- and therefore control policy decisions.

There are thus two meanings to the concept of 'public': "the nature of the collectivity involved, and the nature of the space or style in which that collectivity operates" (March and Taqqu, 1986: 3). In the west, we have forgotten such distinctions and assume only one, a supposedly uniform total public in whose name policy is made. "This assumed uniformity gives rise to an idiom of public interest or common welfare which is essential to formal political action" (3). Only what serves this hypothetical 'public interest' is considered politically legitimate. Because this idiom of public interest is part of a political discourse that has become dominant in the Third World, systems of authority that fall outside the definition are not acknowledged as legitimate.

This is why women's organizations are seen as 'informal', and are not construed as part of the legitimate political structure. A further problem for the legitimacy of such associations lies in the fact that they operate in a less visible sphere: the world of 'women's affairs'. But this does not make their activity 'private'. The lower profile does not correspond to a low level of public acceptance and political power: to the contrary, as the case of the Ifelodun Yoruba women's group described above attests (see also Van Allen's classic study of Ibo women's custom of "sitting on a man" [1972]). To understand the nature of 'public life' in Africa, and of women's role within it, we must abandon the western conceptualization of an opposing private and public space.

The WID literature has argued that it is the public realm that has been privileged over the private realm, by the development process. On the basis of this critique of the public/private dichotomy, I would argue instead that it is the community of men that has been privileged over the community of women. Outsiders, from missionaries to colonial officials to contemporary governmental elites have recognized men's networks as the sole legitimate 'public' with which they should deal -- the uniform, undifferentiated 'public' which embodies 'public interest' inclusively. As a consequence, the complex links between the male and female communities, which serve to make of a village a functioning 'public' whole, have been broken or distorted. Concomitantly, women's community has been relegated to the status of 'private' or informal, in conformity with western ideology. As March and Taqqu say, the view that "informal life is personal and hence apolitical -- especially among the poor and the powerless -- obscured the legitimacy of associations that are not constituted through rational-bureaucratic and legal charters" (5). The denial of the African concept of public, implicit in almost all development efforts, has done a profound disservice to the political life of African communities.

b) The nature of the 'family' and the 'domestic realm'.

The problems with conceptualizing family in Africa have been considered in section B.2. of chapter 3, above. The foregoing discussion regarding the public/private dichotomy bears intimately upon this issue as well. The notion of 'household' is a necessary one, as Bryceson (1985: 11) points out. Far too much of the literature assumes that the 'household' is an undifferentiated unit, however, with no internal divisions or contradictions. Liberal and developmentalist approaches assume that the household may be taken as a unit of statistical analysis, that acts rationally as a corporate entity in the marketplace. Development policies have thus often targeted the household, without considering the differential impact upon its different members.

African sex-gender systems pose special problems for considering the household. The complexities introduced by polygyny are overlooked, for example. Even though a majority of African marriages are now monogamous, the idioms, practices and organization of space is still often structured according to the polygynous marriage, which was the ideal marriage form. As a result of this lack of subtlety in conceptualizing family and household, writers resort to a reductionist attribution of women's problems within the family to 'male domination' -- a vague and ahistorical notion. Bryceson

argues that in most of the women and technology literature, "male domination in its cultural and institutional sense, is treated as an historical given fact. Having identified the extent and incidence of the edge that men have over women in the acquisition and control of technology, the analyses rarely offer an in-depth dissection of its nature." The consequence is that analyses of family and household are "primarily descriptive" (1985:8).

A more rigorous, historically grounded understanding of gender relations therefore requires a clearer conceptualization of the African household. A starting point is the recognition that African households have indefinite boundaries. "Not only do households vary in structure, but also in function, often with household members resorting to participation in other groupings for some of their production and consumption functions" (Bryceson, 1985: 11). The recognition that women's labour is not 'domestic' labour is a particularly important aspect of this reconceptualization. Not only is women's agricultural work not 'domestic', but their transformation (consumption) activities must be seen in a different light as well. These tasks are an "enabling function for agricultural production. Women spend a great deal of time in drudgery which directly or indirectly contributes to production. A case in point is the provision of water, which has most frequently been defined in terms of social welfare. In fact it is properly a matter for agricultural policy" (Fortmann, 1981: 208).

Another erroneous aspect of the concept of 'family' commonly applied is the implicit assumption that inheritance and genealogy centres in the husband and father. For the large areas of sub-Saharan Africa characterized by the matrilineal descent system, this assumption has had serious consequences. Rogers (1980: 129-38) provides an insightful analysis of the active suppression of matriliney by the World Bank and other agencies. Taking as her case the World Bank's Lilongwe Land Development Program in Malawi, she shows how the complexities of land tenure, cooperative production and distribution, and inheritance are reduced in the understanding of project officials to a set of "socialistic" obstacles to progress. In the evaluation documents, matriliney is described "somewhat emotively as 'matriarchy'" (132). This, of course, misses the point about matriliney, which is a system of inheritance and obligation revolving around the uncle/niece and nephew relationship, rather than around the father/children relationship. Although men are still dominant in matrilineal systems, studies do reveal a greater authority for women and more control over communal assets than in patrilineal societies.

To illustrate the conceptual errors perpetrated in the project, she comments on a document that deals with present attitudes to inheritance. The evaluators

cite survey responses from the people they define as 'growers' (mostly men): "The survival of Matriliney in Africa is a talking point among Sociologists and there is certainly considerable evidence of an increased desire amongst growers that inheritance should pass to their children...." The problems with this rationale are [that] the answers are likely to have been influenced by what the enumerators (themselves very Western-orientated, with salaries paid by the project) wanted to hear. In addition the question of what was understood by 'their own

children' is an open one: if, for example, a man felt his nephews or nieces to be his own children, and entitled to inherit his goods, he would probably have responded in the affirmative" (131).

How and why an ideology of the family emerged that was at variance with the African reality is another subject of enquiry. Bryceson (1980) and Mbilinyi (1985a; 1985b) locate the emergence of such an ideology in the political economy of colonialism and neocolonialism. Mbilinyi argues that

Ideology about the male dominant-female dependent nuclear family has been used in an effort to legitimise the periodic expulsion of women from the wage labour market and/or towns during times of crisis. The ideology pertaining to the countryside, where villagers supposedly can survive so long as they work hard enough...helps to rationalise their forcible return 'home' to what is described as their tribal homeplace. Both sets of imagery have arisen in the context of consistently lower wages for women than men in all occupations and at different education levels....Both imageries conflict with the growing rate of urbanisation and the increasing number of female-headed households in villages and towns (Mbilinyi, 1985b: 81).

Analyses of this kind rescue the concept of 'family' from the received truth of a 'natural' state and locate it firmly in the African historical context. Mbilinyi's point is developed further in section (d) below.

c) The economic as the socially determining level of society.

Both neoclassical and Marxist economics assume the primacy of economic motivation in human life (although the structural Marxist school of Althusser, Poulantzas and Laclau discussed in chapter 1 challenges this assumption). Much of the WID and feminist political economy literature sees economic relations as the source of ideological and political structures and practices. Gender relations, as well, are analysed in largely economic terms, in spite of attempts to theorize sex-gender system as an autonomous structure in human society. As I have shown, a focus on the economic contribution of women, and upon economic dimensions of gender relations, has proved to be an important corrective to conceptualizations of women that treat them as marginal, non-economic beings, inhabiting the 'private' realm and requiring 'social welfare' to correct their problems. Nevertheless, it is time to take stock of the preoccupation with the economic.

While it is beyond the scope of this study to provide a critique of 'economic determinism' or to enter the current realm of theoretical debate that encompasses this and related issues, I would like to suggest the importance of examining our assumptions in this regard. Jackson's conclusion about women making choices on political and ideological grounds rather than economic ones, cited in the discussion of the KRP Project in chapter 3, is suggestive. More so is the practical invisibility of the 'social welfare' (or 'social reproduction') issue of gender and health care in either the WID or feminist political economy literature.

Baudrillard, in The Mirror of Production (1975), argues that our theories of economic causality are in fact a metaphor derived from the experience of nineteenth century industrial life, where production was indeed the dominant element shaping society. In a section titled "Materialism and Ethnocentrism" (84-91), he critiques the application of Marxist models of political economy, and the Marxist method of historical materialism, to earlier and non-western societies.

Western culture was the first to critically reflect upon itself (beginning in the 18th century). But...it reflected on itself also as a culture in the universal, and thus all other cultures were entered in its museum as vestiges of its own image....The analysis of the contradictions of Western society has not led to the comprehension of earlier societies (or of the Third World). It has succeeded only in exporting these contradictions to them. At times not even the contradictions have been exported but very simply the solution, that is, the productivist model....Through its most "scientific" inclinations toward earlier societies, [historical materialism] "naturalizes" them under the sign of the mode of production (89-91).

Political economists may find Baudrillard's judgement overly harsh. Nevertheless, we should perhaps be asking whether the 'productivist model' is an appropriate basis for theories of African social relations, either in the past or present. Certainly, attempts to explain all aspects of sex-gender relations in terms of relations of production has proved problematical for theorists, while overemphasis in WID research on issues of production at the expense of other aspects of development problems has created a theoretical and empirical imbalance in the literature. Mbilinyi (1984) identifies economism as one of the chief priorities for research in East Africa.

As the discussion of 'tradition' below reveals, and as I suggest in my discussion of matega above, a fruitful line of research lies in the application of theory about discourse and ideology to our understanding of African political economy. Kardam (1985) indicates that discourse analysis, whereby power relations are understood to be shaped by dominant visions of reality, is only beginning to be applied to WID issues. The problem of the relation between power and knowledge is discussed further in section (e) below.

d) The nature of 'the traditional'.

I have argued at various points against the conceptualization of developing societies as being on a unilinear course between a 'traditional' and 'modern' state of existence. I have also shown how precolonial elements of sex-gender systems are retained in the present in a dominated and distorted form, providing the ideological raw material by which women's autonomy and power may be constrained -- in the name of 'tradition'. Along the same lines of ideological enquiry suggested in point (c), it is important to investigate the ideology of 'tradition' as it pertains to gender relations. Studies such as Katz (1985) demonstrate in the context of African national politics the power of ideological discourses that recruit 'tradition' to their explanations of how society should be. Dominant discourses that support the ruling group

are those that have most successfully coopted tradition to legitimate the group's political power. Similar work needs to be done at the local level, so that contemporary ideological constructions can be distinguished from genuine historical social structures -- especially sex-gender systems.² Disparate evidence suggests that the challenge of women's demand for rights and improved economic and social conditions is met with the accusation that they have abandoned their 'traditional' responsibilities, and are seeking to undermine the family. Such gender discourse has a powerful effect in the creation of guilt among women, and in stifling their dissent.

The political pitfalls inherent in an ahistorical view of 'tradition' are exemplified by the controversy surrounding the question of clitoridectomy. Western radical feminists excoriated the practice as a 'barbaric tradition', while African apologists defended it, and attacked western feminist interference, in the name of 'honourable and functional tradition'. In neither case, is the appeal to a primordial, unchanging 'tradition' helpful in understanding and solving this politically sensitive and medically urgent problem. An excellent analysis of gender discourse is Francille Wilson's article "Reinventing the Past and Circumscribing the Future: Authenticité and the Negative Image of Women's Work in Zaire" (1982):

Authenticité has been a device for consolidating power and legitimizing antidemocratic principles as traditional African values. Today, it is clear that authenticité has been used to obtain mass support and to distract attention away from the pressing economic and social problems that confront Zaire....The rhetoric and reality of authenticité is paternalistic, authoritarian, and self-serving....Under authenticité, the entire responsibility for maintaining the morality of the system rests with women. Men do not have moral responsibilities (190-161).

This study, which goes on to document the ways in which an ideology of 'tradition' is promulgated to control and oppress women, serves as an example of the kind of research that might fruitfully be pursued.

Another exemplary study adds an important dimension to the critique of ahistorical approaches to 'tradition'. The Tanzanian feminist scholar Marjorie Mbilinyi demonstrates in her article "'City' and 'Countryside' in Colonial Tanganyika" (1985a) that colonialism created notions of 'traditional life' to serve its own exploitative ends. According to the conclusions she draws from painstaking archival research, the Tanganyikan regime constructed a dichotomy between rural 'traditional' African life and urban 'modern' life that transformed indigenous society in the service of "the colonial solution." In reality, the colony comprised on the one hand peasant-based economies, and on the other hand a capitalist sector of commercial urban and plantation enterprises, owned by first by German and later British multinational companies, and by individual European and Asian settlers. Both rural and

² Glazier's (1985) study of land and the uses of tradition amongst the Mbeere, cited above as a conceptual contribution to thinking about women's cooperative traditions, is an example of the kind of rigorous historical analysis needed at the local level.

urban enterprises depended on the migrant labour system; the plantations in particular on the largely female casual labour pool.

The aim of the regime was thus "to stabilise the working class and restrict African settlement in town solely to permanently employed workers and the middle classes. In order to successfully carry this out, the African extended family system was attacked, and the nuclear family was encouraged. The secondary economy was heavily taxed, regulated, and wherever possible, undermined. 'Staff associations' or 'workers councils' were promoted among workers to counter the labour movement. Women became central actors and targets in the struggle to impose the colonial solution" (Mbilinyi, 1985a: 88).

Mbilinyi critically examines colonial discourse to uncover the economic and political reality served by the concept of a division between 'city' and 'countryside':

A contrast between city and country permeates colonial commentary on the society its agents found, and the one they struggled to create and rule. In simple terms, the city was associated with non-Africans, men, adults, wage employment and civilization; the country, with Africans, women, children, 'subsistence' and 'bush'. According to colonial ideology, the country was "home" for Africans, in 'tribal areas', and the African in town was considered an 'alien' in 'foreign' territory who had 'immigrated' and was in danger of being 'detrified'....Colonial archives assume this contrast. Moreover, they presume that the past was rural and agricultural. The centuries of urbanisation and economic specialisation which was identified with the development of feudal kingdoms, Swahili culture and the rise of the Zanzibar Commercial Empire, vanish from memory. So, too, do the struggles between slaves and slave-owners, queens and commoners, disappear (88).*

In addition to inventing a false traditional/modern dichotomy, the colonial discourse Mbilinyi analyses could be said to pose the public/private dichotomy discussed in section (a) above: the village being the 'private' sphere in western terms, only the town being truly the 'public' domain. On the grounds of both dichotomies, the demands and needs of the 'country' could be dismissed by colonial policy as backward and unimportant.

Mbilinyi proposes concrete strategies to combat the biases in both the archival record and historians' interpretations of it. Suggesting that "the same facts are subject to different interpretation, depending upon the group or class or sex with which the spokesperson identifies," she argues for the creation of opposing knowledge. But,

* The process Mbilinyi delineates here is a precise description of the discourse of apartheid and the conceptual underpinnings of the Bantustan system in South Africa, whereby the majority of South Africans have been constructed as foreigners in their own land.

The creation of oppositional history is in itself a political act. By speaking, writing, acting, drawing, or singing their own histories, people teach one another new ways of perceiving themselves and the world. Defiance of 'official' histories is an act of empowerment....The main audience ought to be the speakers themselves and the popular classes they represent....This suggests the production of easily readable texts and other media in the local national languages spoken by the people (96).

Recently, we have seen arguments, both by western commentators and by certain African leaders, that the colonial past is over and done with, and should not be used to explain contemporary problems. This argument, once more, conspires to reinforce the vision of a backward Africa, where present dilemmas have no history other than timeless African 'tradition'. I thus agree with Mbilinyi's view that the recapture of history, including that of the colonial era, is a vital task for the present, both as a corrective to western biases regarding Africa, and as a means of empowering local communities -- and particularly women.

Mbilinyi's proposal (and the work of Tanzania's WRDP in general) offers a valuable tool for inserting women not only into the policy-making process, but into the very process of constructing accurate knowledge about their communities and their problems -- the targets of development policy.

e) Liberating subjugated knowledges.

Inherent in all four of the above conceptual problems is a profound epistemological predicament, exemplified by Mbilinyi's call for a struggle to recapture history for Tanzanians. Much of the critique of conceptual frameworks in chapters 1 and 2, and evidence throughout the study, confirm the point that competing views of reality are a central aspect of development dilemmas. Time and again, the review has chronicled the imposition of the dominant, western 'knowledge' regarding a problem, to the detriment of local 'knowledges' that are more appropriate constructions of local reality. Part of the problem has been poor science: inadequate theories and methodologies for understanding 'the family'; the nature of public life; the history of African societies at both the broad and local levels. But this poor science is itself a product of history: emerging as an aspect of and support for the power relations that subjugated Africa. By the nature of these power relations, knowledge of Africa was constructed by non-Africans, according to western categories of thought. The alienation of Africans from their own knowledge of themselves is the other part of the epistemological dilemma. Given the deep differences between the west and Africa in both knowledge and practice of gender relations, and in the construction of female identity, the crisis in knowledge has urgent implications for WID efforts.

It would be irresponsible Utopianism to suggest the possibility of return to a golden age of African self-knowledge (indeed, the suggestion that the African past is more 'authentic' than the African present is implicitly ethnocentric, denying as it does Africans' right to identify themselves as cosmopolitan members of the world community, sharing its modern cultural values and practices). Nevertheless, researchers can no longer avoid the task of investigating the relationship between dominant power structures, past and

present, and the nature of knowledge about Africa. Central to this task is an engagement with the theory of discourse epitomized by the work of Michel Foucault, a thinker who is widely credited with having developed during the 1970s a new method for the study of humans in society.

Foucault (see Power/Knowledge: Selected Interviews and Other Writings 1972-1977 [1980b] for an introduction to his ideas) has been criticised from both left and right, and by feminists as well, as obfuscating and irrelevant to contemporary social and economic concerns -- a trendy theorist of the avant garde. Nevertheless, an increasing number of scholars in the west, including feminists, are recognizing the value of his approach for a fresh understanding of the nature of institutions and the mechanisms of power. The controversial nature of his vital contribution to recent social thought should not deter researchers of gender and development from assessing his theory and adapting his insights in the African context.

Foucault's work shows how ideas -- about madness, illness, crime, and sexuality -- have been transformed in the modern era to serve the tactical needs of new social systems (see Foucault, 1965; 1979; 1980a). Out of his analyses of organized forms of social life, such as prisons, hospitals, schools and insane asylums, has emerged original thinking about the nature of power and discourse, and the way in which our era has constructed humans as objects of knowledge. This is not accomplished by the deliberate actions of power-wielding practitioners, neither does it follow formal laws or rules. Instead, cultural practices are structured by a "grid of intelligibility" (Dreyfus and Rabinow, 1983: 121⁷) which emerges through the subtle interplay of power and knowledge. The 'grid of intelligibility', according to Foucault, is "a thoroughly heterogeneous ensemble consisting of discourse, institutions, architectural forms, regulatory decisions, laws, administrative measures, scientific statements, philosophical, moral and philanthropic propositions -- in short, the said as much as the unsaid" (Foucault, 1980b: 194).

While his work focusses almost exclusively on western institutions (and there is a vigorous debate as to the quality of his historical methodology), Foucault's relevance to the Third World is nevertheless significant. First, his thinking provides a method for an epistemological investigation into how the African -- and especially the African woman -- has been constructed as an object of knowledge. Second, his insights on the relation between power and knowledge provide a valuable conceptual tool for understanding the emergence of this knowledge about Africans in the colonial and postcolonial contexts. He conceives of power "not as a property, but as a strategy...one should decipher in it a network of relations, constantly in tension, in activity, rather than a privilege that one might possess" (1979: 26). Power is not simply exercised in a monolithic way by those who 'have it' over those who 'do

⁷ "Grid of intelligibility" is Dreyfus and Rabinow's translation of Foucault's term dispositif. They argue that the conventional translation in English editions of Foucault's work, 'apparatus', is too vague to convey his meaning, in that "it underestimates Foucault's attempt to reveal something about the [cultural] practices themselves" (Dreyfus and Rabinow, 1983: 121).

not have it' (the notion of power in much underdevelopment theory). Conversely, knowledge is not something that can only exist apart from power relations.

Perhaps we should abandon the belief that power makes mad and that, by the same token, the renunciation of power is one of the conditions of knowledge. We should admit rather that power produces knowledge (and not simply by encouraging it because it serves power or by applying it because it is useful); that power and knowledge directly imply one another; that there is no power relation without the correlative constitution of a field of knowledge, nor any knowledge that does not presuppose and constitute at the same time power relations....In short, it is not the activity of the subject of knowledge that produces a corpus of knowledge, useful or resistant to power, but power-knowledge, the processes and struggles that traverse it and of which it is made up, that determines the forms and possible domains of knowledge (1979: 27-28).

This monograph has made the implicit argument that contemporary international economic relations, and the aid efforts that are a part of them, constitute a power relation which has shaped, and in turn been shaped by particular "forms and domains of knowledge" about Africa and African women. It is not that the discourse is a coherent and unified one: indeed, I have argued that knowledge about Africa and its development problems is fragmented among the different research/action loci and between different conceptual frameworks. As Foucault says about discourse: "It is often made up of bits and pieces; it implements a disparate set of tools or methods. In spite of the coherence of its results...it cannot be localized in a particular type of institution or state apparatus" (1979: 26).

Finally, In thinking about the utility of discourse theory for feminist political economy and for practical research on women, technology and development, we should pay attention to Foucault's ideas about "subjugated knowledges", which are directly relevant to the point made above about the suppression of local 'knowledges' -- and about the struggle to retrieve them. Foucault argues that we are facing "an insurrection of subjugated knowledges."

What has emerged in the course of the last ten or fifteen years is a sense of the increasing vulnerability to criticism of things, institutions, practices, discourses. A certain fragility has been discovered in the very bedrock of existence -- even, and perhaps above all, in those aspects of it that are most familiar, most solid and most intimately related to our bodies and to our everyday behaviour. But together with this sense of instability and this amazing efficacy of discontinuous, particular and local criticism, one in fact also discovers something that perhaps was not initially foreseen, something one might describe as precisely the inhibiting effect of global, totalitarian theories....The attempt to think in terms of a totality has in fact proved a hindrance to research....I believe that what this essentially local character of criticism indicates in reality is an autonomous, non-centralised kind of theoretical production, one that is to say whose validity is not dependent on the approval of the established regimes of thought....

By subjugated knowledges one should understand...a whole set of knowledges that have been disqualified as inadequate to their task or insufficiently elaborated: naive knowledges, located low down on the hierarchy, beneath the required level of cognition or scientificity....It is through the reappearance of...these local popular knowledges, these disqualified knowledges, that criticism performs its work....With what in fact were these buried, subjugated knowledges really concerned? They were concerned with a historical knowledge of struggles. In popular knowledge there lay the memory of hostile encounters which even up to this day have been confined to the margins of knowledge (1980b: 80-83).

Foucault calls for researchers to "establish a historical knowledge of struggles and to make use of this knowledge tactically today." The purpose of such "genealogical research" is to "entertain the claims to attention of local, discontinuous, disqualified, illegitimate knowledges against the claims of a unitary body of theory which would filter, hierarchise and order them in the name of some true knowledge and some arbitrary idea of what constitutes a science and its objects....It is really against the effects of the power of a discourse that is considered to be scientific that the genealogy must wage its struggle" (83-84).^{*} It is precisely this task that such feminist practitioner/scholars as Mbilinyi are attempting. Indeed, the feminist project everywhere can be construed as an attempt to give women and gender relations a historical context. The task of western scholars and aid agents is to take local knowledges seriously: to rescue them from the "margins of knowledge" and to incorporate them into a scientific understanding of African society. As well, western scholars must recognize the dominant position of their own knowledge in the hierarchy, and the role that knowledge plays in international power relations. Section E of chapter 6 puts forward some concrete suggestions for research that address the epistemological issues raised here.

* The anthropologist Clifford Geertz, in Local Knowledge: Further Essays in Interpretive Anthropology (1983) is an important protagonist in this struggle to establish a voice for disparate knowledges, and an engaging writer on the subject. He suggests that the growing interest in interpretation and exegesis is in part "a result of the growing recognition that the established approach to treating such phenomena, laws-and-causes social physics, was not producing the triumphs of prediction, control, and testability that had for so long been promised in its name. And in part, it is a result of intellectual deprovincialization. The broader currents of modern thought have finally begun to impinge upon what has been, and in some quarters still is, a snug and insular enterprise" (Geertz, 1983: 3). To the extent that development thinking has been such a "snug and insular enterprise", nonchalantly dismissing the dismal failures of its own predictions, tests and methods, it is long overdue for such "intellectual deprovincialization". For a valuable and highly readable introduction to interpretive social science, see Rabinow and Sullivan (1979).

4. The Neglected Focal Points for Social Transformation

a) Women's rights.

Women's rights are one of the aspects of development that have been neglected in the push to understand women's economic role. Case studies above have charted ways in which women have lost customary rights, particularly in land. There is some important work on the consequences for women of changes in land tenure (as the synopsis in of Okeyo's study in the previous chapter attests), although the WID literature does not address precolonial legal systems as thoroughly as it should.

There needs to be a much more specific focus, however, on the question of women and the law (see the many useful articles by African scholars in Canadian Woman Studies/les cahiers de la femme, 1986 for the direction such enquiry might take. Often there are glaring inequities in the national laws of African countries (a legislative attempt to criminalize wife-beating was laughed out of the Kenyan Parliament several years ago, for example). Apart from these obvious inequities, there has been a drift in recent years "into de facto attenuation of women's rights" (Guyer, 1986: 415). While discussion of women's rights in Africa is often linked with concerns about importing western 'women's liberation', claims that the rights issue is just another form of ideological imperialism are specious. As Howard says: "While the provision of women's rights cannot be separated from the attempt to develop sub-Saharan African countries, neither can women's rights be put aside until such a Utopian time as the government of a newly developed society sees fit to grant them" (1984: 46).

Rights are more pertinent to the issue of technology and development than may appear to be the case. The ability of women, individually and in their associations, to adopt and sustain new technologies for the development of their communities depends upon their civil rights. Many studies show that women rationally choose not to invest energy and income in the application of new technologies to productive resources which are no longer theirs by right. Female assessors on customary tribunals, for example (Guyer, 1986: 415) could ensure that customary rights² are not whittled away further. One aspect of women's rights, addressed by some feminist political economists, is the issue of usufructory or use rights. Especially in patrilineal societies, where most

² While I am using the familiar term, 'customary rights', I do so with reservations, as the term connotes a dichotomy similar to the formal/informal dichotomy discussed above. The implication is that there is 'law', which is the western law introduced with colonialism, and then there is 'custom', which does not have 'the force of law'. While it is true that in the present customary law is subordinate to common law (the recent Kenyan burial case cited above notwithstanding), it is yet another example of ethnocentrism to assume that Africans in the past had 'customs' but no 'laws'. A woman's use right to the milk of her husband's herd, or to a plot of land from her husband's lineage, was as legally binding -- and litigable -- as a title deed to an office building today.

property was collectively owned by men and inherited through the patrilineage, usufructory rights were the preeminent form of rights in productive resources. The imposition of western notions of the primacy of property ownership has rendered these indigenous rights invisible or illegitimate. Research into appropriate legal reform, to protect and enhance women's rights under the adopted British common law or French Napoleonic law, is of urgent concern. At present, parallel operation of indigenous and western legal systems work to women's disadvantage. Bridewealth remains legal, for example, as a touted cornerstone of 'traditional' marriage. Yet there are no modern laws to control the violations of indigenous law are often practiced in regard to such customs.

A valuable conference on Women's Rights in Zambia in 1985 made a number of these links.¹⁰ For example, Stella Chintu-Tembo (1985) examined women's rights and health and concluded that, while women have the same rights as men with regard to health care, lack of education regarding these rights has seriously undermined health care delivery to them. She also discusses dilemmas with regards to rights and health that are unique to women: for example, the law does not insist on hospital delivery of babies, but women's right to choose between hospital and home births is subverted by the lack of facilities for home delivery, and the University Teaching Hospital's policy "to achieve 100% hospital delivery or medically supervised delivery" (65). Provision of some training for traditional midwives appears to be at odds with the hospital policy.

A particularly sensitive but important area for future research on women's rights is the impact of draconian new versions of Shari'a law to Muslim societies in Africa (see El Naiem, 1984, in the context of the modern fundamentalist movement). Quite apart from basic questions of human rights, there are serious implications for the ability of such women as the Hausa of the KRP to contribute meaningfully to the development of their societies. Again, sensitivity to the historical aspects of women's oppression under Islam is required. As Muslim women at the Nairobi Forum in 1985 themselves insisted, the view of Islamic ideology as unchanging, and primordially sexist, is ethnocentric and unscientific. These women expressed resentment towards western feminists for the condemnation of their religion in the name of western-defined human rights. Feminist reform within Islam depends upon interpretation of the Islamic tradition, and upon an appeal to aspects of its texts that are supportive of women.

¹⁰ The Second National Women's Rights Conference was held at the Mindolo Ecumenical Foundation in Kitwe, March 22-24, 1985 and was supported by the Zambia Association for Research and Development (ZARD) and the University of Zambia. It included sessions on women and human rights; women and health; women and family; and women and development. Each section involved the delivery of research papers and the production of recommendations. The Proceedings (ZARD, 1985) reveal such titles as "The Situation of Handicapped Women in Zambia"; "The World of Mothers: The Right to Good Health"; "Women and Polygamy"; "The On-Going Food Crisis in Africa and the Rights of Female Farmers".

b) The role of the media.

Little attention has been paid in either the WID or the feminist political economy literature to the relationship between the media and women. There are two issues that need to be addressed: the first is the dissemination of negative stereotypes of women; the second is the use of the media for the transmission of information about new technologies and techniques. It has been left up to African women's organizations, notably AAWORD and WIN, to draw attention to the problem. AAWORD has focussed its attention on the former issue: it hosted a meeting of professional media women and researchers, entitled "Women, Communication and Development, What Perspectives for Nairobi?" in Dakar, Senegal in 1984 (the meeting was funded by CIDA). A similar meeting for women Journalists of Eastern and Southern Africa was held in Nairobi the same year. Of particular concern to the Dakar meeting were the "trivial images of women in the media". The conclusions, substantiated by an ATRCW research project on the mass media in Africa (ATRCW, 1985b) indicated that western images of women as housewives and dependents, reinforced by appeals to a reconstructed and false African 'tradition', were common. Clearly, the media trend undermines accurate perception of African women's real position in society, and hampers efforts to have them taken seriously by policy-makers.

The WIN organization has identified a disturbing trend in the media with regard to the portrayal of Nigerian women (WIN, 1985a: 108-125): in addition to the perpetuation of erroneous stereotypes of women, there has been a misogynist tendency to report negatively about women's activism, and to neglect their achievements. The organization's commentary bears quoting at length:

The Nigerian media tends to give disproportionate prominence to reports of negative activities....The news that a female engineer has been elected to head an international body, or that a female scholar has been awarded an honorary degree abroad, is tucked away in the inner pages. Women in the establishment are given news space (although hardly headlines), when they appear at important functions as gracious hostesses, giving charity, or performing one welfare role or the other....However, on any occasion that female activities indicated that they, (normally regarded as exceptions) could be a rule, the media embarks on a trivialisation campaign. Witness the contrast between the awed reports of the first set of women in civilian government 1979-83, and the boisterous jokes bandied about [regarding] the female upsurge in the Legislature and Executive post-1983.

Condemnation and ridicule are meted out to female activism that does not emerge from the ruling classes. For instance, market women who adhere to their traditional locations of trade, are portrayed as 'stubborn', while as tail-ends of the middle-man chain, they are reported to be 'economic saboteurs'. When they try to let the government know how they are affected by various policies, they get less coverage than statements by women of the upper classes who urge them to obey government's directives....Whenever an issue concerning women crops up, the

overwhelming majority of editorials, cartoons and news analysis bring pressure on women to conform. For instance, crime is not only seen as a societal ill, but as a direct result of women neglecting their homes, husbands and children, in their 'inordinate' pursuit of wealth. Male criminals are actually pitied for having succumbed to pressure of greedy womenfolk, who demand what their men cannot afford to supply....

In the main, attention is paid to the worst side of women, witness the series introduced by the Sunday Sketch at the tail-end of the UN Decade of Women: 'The Wickedest Women in History'. Media opinion also reinforces the societal unequal status of women, pays grudging lipservice to benefits granted women, exhorting them to be grateful for the 'concessions' and not to regard them as rights.... Perhaps the most startling indication of the deep-seated antipathy to women was the furor over women in drug trafficking. Relentlessly the editorials, cartoons, and news analyses harassed women to the extent that by January, 1985, the word 'cocaine' was synonymous with woman, and female criminality was analogous to women's liberation (111-116).

The concern with media imagery, which up to now seems to have remained a preoccupation of African women alone, is an important area for investigation by the research/action loci.

The role of the media as a development tool is a less thorny issue. Studies have revealed that the media have been underutilized as such a tool, chiefly as a result of poor planning and inadequate research as to women's media-related behaviour. For example, Subulola and Johnson, in a survey of beliefs concerning infant feeding and child care among 143 Benin City mothers in Nigeria (1977: 107), found that only five mothers cited radio and television as a source of information, in spite of regular programmes on the subject of nutrition and child care. Another study by Odumosu (1982), designed to chart the diffusion of government-sponsored radio messages on health, came up with a similar conclusion: the message was not getting through. Odumosu and Subulola and Johnson's studies both identified the use of English rather than the vernacular as barriers; Odumosu discovered, as well, that the broadcasts of the 'women's programmes' were being made in the middle of the day, when most women, who were petty traders, were occupied away from the home (108).

Odumosu put in a plea for "the traditional media", i.e. the word-of-mouth method of disseminating information, and the use of bell-ringers, dispersed to strategic points. In one survey of 200 pregnant women, he found that over 90 percent of his sample had received tetanus shots. Although 79 percent possessed radios, only 4.5 percent heard about the immunization programme via this medium. The rest learned of the programme via word of mouth. The conclusions Odumosu reached are suggestive of the kind of research on media that might yield a significantly higher return for technology-information programmes. It is worth noting, as well, that the concern for the media as a tool appears to be restricted to health and nutrition researchers, a fact that social scientists and development planners should remedy. Correcting programme times, using the right language, and researching methods to utilize

the 'traditional media' would seem to be among the more easily solved development dilemmas.

c) The social dimensions of health care.

Several examples of the importance of social context were given in the section of chapter 2 dealing with health technology. The discussion above of women's rights also draws attention to the wider context of health care delivery. The issue of health must be connected with other development concerns: for example, health cannot be separated from agricultural issues. If women are disempowered economically and socially, then their ability to retain control of family health maintenance will be undermined. 'Appropriate technology' for childbirth is a particularly pressing social issue. Several studies in the social health literature pointed out that Nigerian midwifery practices, if improved with a better understanding of cleanliness and of pathology requiring a physician's intervention, are the most suited to conditions of low levels of state-provided health care. As well, they make the most efficient use of society's resources, given the supportive social conditions prevailing in the village, including women's familial and community organizations. In particular, obstetrical practices that are under criticism in the west but that have been introduced to Africa (such as the use of the lithotomy position, where a woman gives birth on her back), are criticised. Problematical in a context where high-technology inputs are available (such as fetal monitors), such practices are even more problematical where such equipment is not available.

Pamela Brink, a nurse-anthropologist who conducted a detailed (1982) study of Nigeria midwives involving observation as well as statistical methods, reported that women will attend hospital or community health centre ante-natal clinics, but are reluctant to deliver there, preferring their local midwives. The reasons they give is that "the hospital will not allow them to squat for delivery and that the midwife is not in constant attendance upon them during the entire process as their village Traditional Birth Attendant is. When asked why they attend antenatal classes if they do not intend to be delivered by the nurse-midwife, they state that they attend antenatal clinics to receive the medicine and the vitamins necessary to make their baby healthy." Her ensuing report of the sound midwifery techniques practiced, as well as of the supportive family environment for the birth, substantiated the women's judgement that home delivery was the rational choice.

A further social aspect of health care is the importance of involving women's organizations in health development. A study by Feuerstein in Nigeria (1976) compared a cholera prevention programme in one community, where traditional western methods of attempting to influence people individually were used, with a programme in another community which aimed at obtaining community approval for the health policy being promoted. In the first, only 45 percent of villagers reported for immunization, while 73 percent of the second village came for their shots. Feuerstein discovered, however, that the medical profession showed little appreciation of the contribution communities could make to health care. She found a sentiment among doctors and nurses that public health was secondary to hospital medical care, and that training professionals was more important than training health leaders. "[These]

attitudes are as difficult to change as traditional health beliefs because of their cultural and psychological aspects" (52).

A survey of 400 Kenyan village women by M.K. Were (1977), to determine their attitude towards equal rights and towards their opportunities within the community, yielded a clear consensus among the women that their organized groups were the appropriate basis for managing health care. They felt that they could achieve more through collective action than through individual effort in moving towards what they called 'healthy living' (529).

These findings, when combined with the tools for analysing social and economic process developed in chapter 4, show the possible direction for future work on the social context of health technology transfer.

d) Indigenous technology and invention.

While it would seem self-evident that indigenous technology was well adapted to African conditions, given Africans' success in populating a continent and creating a culturally rich and diversified civilization over several millennia, little has been done to determine what aspects of such technology should receive active encouragement for retention. Indeed, little is known of inventions and technology that lost out in the face of cheap industrial imports over the last one hundred years. The Haya of East Africa were making steel in blast furnaces almost two thousand years before it was invented in Germany; the decline of smithing of all kinds as a result of colonial trade in implements from Sheffield is a better known phenomenon. MacKenzie (1986) records in detail the sound agricultural practices of Kikuyu women, in the use of fertilizer, contoured fields, windbreaks and so on. A number of the case studies presented in this monograph imply the appropriateness of indigenous technology: in physical terms, in social terms, or both. The case of the rejected oil palm presses, cited in chapter 3, demonstrates both. The account of new stove technology illustrates the great social significance of traditional cooking technology. The starting point for research into this important issue is the assumption that African technology is not inherently 'backward', but that it is adaptive. The conditions to which it was adapted -- social, economic and environmental -- may have changed, and thus new technology may be required. But it cannot be assumed that in every circumstance, a new way of doing things is better than the old.

As an example of the kind of speculative thinking that might be of use: I doubt if any researcher has considered the possible connection between the short-handled hoes women use, that are often decried for the way they make women bend over for hours every day, and the strong backs and necks necessary for carrying heavy head loads. In a continent where draught animals have been historically barred by tsetse fly, or where terrain or economy has made use of such animals difficult or impossible, the human head has been the chief means of transportation. Yet back problems are not common among African women. It is unrealistic to assume, given the conditions of poverty in Africa, that head loading will be abandoned in the near future. Changing other aspects of women's physical work, however, such as providing them with hoes that do not require bending, might prevent development of strong backs that are not

injured by heavy head loading. This statement is based on a hunch, developed from hours of watching Kikuyu women at work. Given our discovery that our own unexamined assumptions about our artefacts and our bodies have caused problems in technology transfer, such imaginative connections need to be made, in order to break free of our biases. One might wonder, for example, what effect on 'appropriate technology' design western attitudes to women's muscular strength might have had. The idea that anything weighing over twenty pounds requires a man's help in carrying would flabbergast a Kikuyu woman, for whom loads of 100 pounds are possible over long distances (heavy children, of course, do not evoke the same chivalrous response as a suitcase in our society, interestingly enough: our own muscular strength is expected to vary according to the legitimacy of the load). The point of thinking about interrelationships between technology related tasks, and about such questions as muscular strength, is that we cannot assume to know the connections between one kind of technological practice and another unless we conduct the research.

As for invention, rather than searching in vain for documentation of contemporary African examples, I will simply draw the attention of the reader to the phenomenon observable in any African village or town: a child running down the street with the most marvellous wheeled contraption, full of moving parts and complicated hardware. To argue that Africans are uninventive, or that invention does not continue daily, is to be at best ignorant of ordinary African life, and at worst racist. What must be examined are the social and ideological reasons why African inventiveness has not been translated into a culture of mechanical competence, as exists among Asians, by contrast.

e) The conscientization of men.

Sexist bias at all levels of policy making was one of the major findings in the review presented in chapter 3. Western feminists have agonized for years, in academia and in aid agencies, about how to make their male colleagues read their articles, attend their workshops, and integrate the substantial analyses and findings of feminist research into their own work. We have found no solution as yet, although there have been advances on some fronts.¹¹ The question of conscientization of African men, then, exists in a worldwide context of massive indifference towards the efforts of feminists, male and female, to insert women and gender into knowledge about human society. In Africa, the issue is very sensitive politically. It is ironic that in a continent where formerly women enjoyed greater power and autonomy than in most other regions of the world, in the present, efforts to change men's minds are seen as profoundly threatening. From the level of political

¹¹ The annual meeting of the Canadian Association of African Studies, held in Edmonton, Alberta in May 1987 was different from meetings of even a few years ago. Good attendance at the 'women's sessions', references in men's papers to women and to gender relations, and even feminist papers by African male scholars, indicate a newly established -- if still contested -- legitimacy for feminism and gender issues in African Studies in Canada. The depth of the commitment to what has become a fashionable scholarly stance remains to be seen, however.

theory, to the level of operationalizing technology-transfer schemes, research on sexist ideology and how it may be overcome is required.

5. The Boundary Problem

This problem has been extensively documented in chapters 1 and 2, and has been demonstrated through several of the case studies presented. Rather than repeat the assertions made above, I leave a consideration of practical ways to overcome the problem to chapter 6, where concrete research guidelines are spelled out. One suggestion that it is important to make, in spite of the self-evident value of the point, is that agencies make a policy of identifying the bridge-building suggestions that are often made in the studies they commission, and actively work to operationalize them within the structure of their organization.

6. Who Does The Research?

African women's sensitivity to the question of outside researchers was addressed in chapter 2; the problem of the subordination of local 'knowledges' is discussed above in section 3, on conceptual problems. While the goal should be for Africa to take charge of the production of knowledge about itself, it is important for us to recognize, as some African feminist researchers do, that a simplistic attitude favouring any African research over all outside research will inevitably lead to certain biases, and to the perpetuation of conceptual errors that indigenization is intended to overcome. Mbilinyi, in particular, is clear-sighted about the problems of an 'African women only stance'. As mentioned above, unequal access to research resources and to channels of dissemination will ensure that elite women will dominate research efforts, and that the voice of ordinary African women will once more be silenced. Feminist political economy has revealed how elite women have been co-opted ideologically, economically and politically to the western-dominated interests of their class. Only those research organizations, such as Women in Nigeria, Women's Action Group (Zimbabwe), Women's Research and Documentation Project (Tanzania) and a few others, which have analysed class structure and sought to account for it in their research design, may succeed in overcoming the limitations of existing conceptual frameworks, and generate programmes for research and development based on accurate knowledge of sex-gender systems and the local community. These organizations seem to be operating on the best principles of women's (genuinely) traditional cooperation: research ngwatio.

A review of the literature on women, technology and development in Africa has indeed revealed that the significant divide in conceptual approaches is not between Africans and non-Africans. No magical insights are bestowed on intellectuals simply because they are African: neither does a white skin doom a researcher to error. The distinction between valuable and inappropriate research lies quite specifically in the conceptual framework used, as I have suggested throughout the monograph. And African scholars have contributed to each conceptual framework discussed. To suggest that an African's ethnic background is the key determinant of the validity of his or her ideas trivializes the complexity of the intellectual issues involved; the suggestion may in fact be considered ethnocentric and condescending (equivalent to the

backhanded compliment that "blacks have rhythm"). Projects that uncritically seek African researchers, failing to scrutinize their credentials or the quality their work, convey the message that the issue is not important enough for the application of our own rigorous standards of analysis and criticism.

Given our relative advantages, and the unequal power relations between the west and Africa, the task of critiquing African scholarship and action is an extremely sensitive one, however. On the one hand, the criteria by which judgement is passed must be scrupulous in avoiding the ethnocentric bias described for so much of the literature and policy on Africa -- i.e. we must avoid the often-levelled charge of 'intellectual colonialism'. On the other hand, we must ensure that the standards we apply are as rigorous as those we demand for research on our own society.

Beyond this, the reality that a substantial proportion of the resources for research and action reside in the west, both in agencies and among scholars, ensures that work on Africa will inevitably continue here. Our moral responsibility in this regard is twofold. First, we should ensure that our efforts genuinely serve African interests and derive from a sounder knowledge than we have displayed up to now. Second, we should make a priority of identifying and supporting those research efforts in Africa that are tackling the conceptual problems of development, and that are engaging in useful, development-oriented feminist political economy. Both responsibilities require respectful participation in current African attempts to uncover and assert local knowledges.

CHAPTER 6

FRAMING FUTURE RESEARCH

The previous chapter has suggested a number promising directions for new research, both in terms of specific methodologies and approaches to the problem of technology transfer, and in terms of larger theoretical questions that will provide a grounding for a sounder understanding of technology, gender and development in Africa. This brief chapter proposes some concrete guidelines for conducting such research, organized around five tasks. The first proposal suggests a checklist of research topics for the task of classifying sex-gender systems. The second proposal puts forward the idea of a template for exploring interrelationships between development policy and social systems. The third offers a model for concrete action regarding technology dissemination, that takes account of the need for community participation in such dissemination, and the scarcity of resources for it. The fourth introduces the idea of a programme inventory to catalogue successful development efforts. The fifth proposal presents an exercise in the application of theory to a practical aid issue, the aid expert/aid recipient relationship, as an example of how to tackle the task of addressing the knowledge crisis in Africa.

These guidelines should not be construed as posing a unified, singular approach to research problems and opportunities: rather, they spin off in several methodological directions, the aim being to stimulate imagination as to possible methods and objects of more fruitful research.

A. Classifying Sex-Gender Systems

One of the major findings of this monograph is the lack of understanding regarding sex-gender systems, in both the developmentalist and WID literature: the historical and cultural specificity of gender practices have been almost entirely ignored in the former, and given only descriptive treatment in the latter. Meanwhile, feminist political economists have on the whole not paid detailed attention to issues regarding technology transfer. Knowledge needs to be generated in a systematic way for African societies, using a standardized framework of analysis so that comparisons can be drawn between communities, and so that generalizations can be made -- or rejected if they are inappropriate. It would be particularly useful for policy planners to know, for example, that the experience of the Kamba in Kenya with regard to the adoption of a particular programme is likely to be similar to that of the Ibo of Nigeria, given similar sex-gender systems. At the same time, the different political economies of these two groups can be taken into account.

What I am suggesting is a typification of sex-gender systems, as they existed in the past, and as they have been transformed in the present. From such a framework, one would be able to make the generalization that in patrilineal bridewealth societies, land tenure arrangements were X and Y, and have become A, B and C in the present; in matrilineal bridewealth societies, by contrast, land tenure operated according to P, Q and R, and contemporary

political economy has transformed it in a way different from that of patrilineal bridewealth societies.

Such a typification will on the one hand allow the space within which to analyse each target community in historical and cultural terms, and on the other hand provide the framework for generalizing, comparing, and applying successful results from one area to another. The typification must draw upon:

- 1) Good, non-ethnocentric and non-elitist existing studies, especially those done by African researchers.
- 2) Interpretive reading of older texts, particularly the early anthropological literature, trader's diaries etc. While many of these texts are sexist, they contain crucial information regarding precolonial sex-gender systems and modes of production. Contemporary oral history is too far removed from these to be of as much use. An excellent example is Leakey's (1977[1933]) compendious study of the Kikuyu before 1903. Several feminist scholars, such as Clark (1980) and in particular Mackenzie (1986), have used this text a mine of information.
- 3) New research focussing on sex-gender systems, and in particular on women's communal activity.

The typification of sex-gender systems may be operationalized by following a checklist of research questions, to be covered by archival work, interviews, observation, and use of secondary sources. The study should have detailed information about, and analysis of, the following:

a) Contemporary political economy:

- i) Political system of the nation of which the community is a part: military dictatorship; nominally democratic; socialist; multi-party; etc.
- ii) Local formal power structure: system of local government, District Administration; power of political parties at the local level, role of government-sponsored cooperatives, etc.
- iii) Economy: resource base, e.g. pastoral or agricultural, or mixed; degree to which commodification of production and integration into the national and international market has occurred; nature of crops and their price history.
- iv) Ethnicity: 'Tribalism' must be treated historically. Ethnic divisions are much sharper in the present than they were in the past. What have been the advantages or disadvantages facing the ethnic group under consideration? How does it stand in relation to national political power, and distribution of resources?

b) Precolonial political economy:

- i) Kinship and residence system: patrilineal/patrilocal; matrilineal etc. (this will draw on classical ethnological material). Closely linked to the topic of kinship is
- ii) Sex-gender system: structure, ideology and practice of gender relations (this will draw on recent theory and research for models). Particular attention should be paid to the relations and rights of co-wives, with respect to each other, and to their husband and his lineage. As well, women's differing status and rights as wives and as sisters should be explored.
- iii) Land tenure, stock ownership and inheritance laws.
- iv) As a particular aspect of the above to be targeted, usufructory (use) rights of both men and women.
- v) Related to all four of the above, the household and village division of labour, especially the sexual division of labour.
- vi) Local power/knowledge regarding the functioning of society, specifically, in this context:
 - Agriculture
 - Health practices
 - Nutrition

To what degree did this power/knowledge reside in individuals, and to what degree in community organizations, from elders' councils (male and female) to women's groups to co-wives?
- vii) Organized forms of women's association. Was this formalized in age grades, trading groups or secret societies? If not, what kind of ad hoc association characterized women's cooperation among themselves? What functions, responsibilities, and authority did women's associations carry? What was the relation between men's and women's authority? What was the relation between women's position as wives and their position as community members?

c) The process of transformation:

Each of the above seven research topics should be taken and viewed as dynamic historical process. Once a picture of precolonial society has been created, the basis has been laid for considering the elements in transition. For example, the way in which women's traditional organizations have been transformed should be investigated. The researcher should be particularly concerned to

discover the ways in which special-purpose groups, such as a church group, a rent-strike group, a weeding group, become the basis for wider political action or for other tasks in the community. It is important to consider the process of transformation in terms of the community as a whole (linked to the wider political economy), rather than in terms of changes for individuals.

Examples of specific questions that may be asked are:

- i) **Kinship and residence:** What impact have housing projects with a western design had upon polygyny? Where co-wives share a dwelling, how has this affected wives' rights and responsibilities, and the family's ability to perform its economic and caretaking tasks?
- ii) **Sex-gender system:** The above questions may also be considered as questions about changes in the sex-gender system. What has happened to the practice of bridewealth, and what are the implications of these changes for the status and autonomy of wives and daughters? Has there been a shift to monogamy, and if so, how has this affected women's rights, and their role and authority as mothers? What has been the impact of Christianity on gender relations?
- iii) **Land tenure, inheritance:** How has the individualization of ownership of land and stock affected resource use and control, and inheritance patterns? Has the shift to individual ownership negatively or positively affected families' self-sufficiency? In the context of the move towards a patrilocal nuclear family, how have matrilineal land tenure and inheritance rights been affected, and what does this mean for the education and health care of children?
- iv) **Usufructory rights:** Closely related to the above, how has individualized land tenure affected women's use rights in land and/or livestock? Have these changes affected women's ability to carry out their economic responsibilities? It is important to consider, as well, the use rights of sons, who may be excluded from access to family resources by individualized ownership.
- v) **Division of labour:** How have the above four issues affected the village division of labour, especially the sexual division of labour? What has been the impact of male out-migration upon the division of labour, especially upon women's work? Has mechanization altered the division of labour, and if so, has this been to women's disadvantage?

- vi) Local power/knowledge: What has been the impact of the domination of western knowledge (formerly under colonialism and today in the context of independence and development aid) upon traditional knowledge? How has this affected local communities' ability to make informed and relevant decisions, specifically with regard to health practices, agriculture and nutrition? Has community-based knowledge, residing in men's and women's councils and groups, given way to specialized knowledge monopolized by certain individuals in the community, or by 'expert' outsiders? Have women lost out to their husbands and/or the community regarding the production and dissemination of knowledge? Given the breadth of this point of enquiry, the questions should be focussed on concrete, specific practices.
- vii) Women's organizations: What is the form and function of contemporary women's organizations, from household to district? How do these relate to former organizations? To what degree are women's groups -- whether for trading, cultivation, processing, social events, or religious purposes -- locally generated, or imposed from above? What has been the relative development success of locally generated groups versus imposed groups?

Note that these are selected examples of the questions that may be asked about the process of transformation, and are as such far from exhaustive. Beyond a general analysis of the broad changes with regard to each of the above topics, studies will pose those specific questions which bear most directly upon their practical concerns. Those concerned with health technology should focus particularly sharply upon questions of power/knowledge, which bear dramatically upon a family's ability to manage its own health care or solicit necessary medical intervention.

B. Overcoming the Boundary Problem

In addition to the soul-searching I recommended at several points in the study, research/action loci may draw upon a practical tool that will allow progress to be made, while the larger political and philosophical issues are being worked through within the organization. The following is a template for making interconnections between previously unrelated or poorly related areas of concern. To begin, efforts should be made to conduct a study modelled on the above guidelines in every area for which a development programme is planned. It may not always be possible to conduct a full-scale study, but, with the use of secondary sources, and this focussed methodology, an analysis of some degree of depth should be within the reach of most projects. The case study thus obtained becomes the necessary basis for the applied research that will generate the specific project.

The technique here is to ask a series of questions about the proposed technology transfer programme, relating to whether women's participation/

knowledge/organizational practices and abilities/resources have been taken into account. As well, the questions should uncover the impact of the new technology upon gender relations, both within the family and in the community at large. In turn, consideration should be given to the possible ways that existing organizations might divert the proposed programme, or support and enhance it, given the nature of their economic and political interests. The following is a template of interrelationships, with some examples. Once again, the examples are far from exhaustive: considerable effort should be put into working out the lists of correlating factors to be examined, according to the practical aims of the proposed research.

TEMPLATE OF INTERRELATIONSHIPS FOR
STUDYING TECHNOLOGY TRANSFER

- vaccine programmes <u>and</u>	traditional health practices and beliefs regarding the disease in question decision-making power regarding health usual methods of information dissemination community involvement etc.
- water procurement <u>and</u>	sexual division of labour decision-making power regarding different types of technology impact on daily social routine etc.
- AIDS education <u>and</u>	Sex-gender system Decision-making power regarding sex Customary control of knowledge regarding sex matters the economics and culture of prostitution etc.
- Information technology (e.g. radios) <u>and</u>	control within the household over consumer products and their use Daily schedule of tasks of community members relative to time of instructional programmes etc.

C. Organizing for the Dissemination of Technology

This study has substantively demonstrated the value of women's grassroots organizations, and their power (even if construed as 'informal') to influence village developments. The study has also shown the problems with the top-down approach, from sexist bias in policy to inadequate account of women's participation in development. What is also clear is that the resources for disseminating new knowledge are limited. This scarcity may be turned to advantage, however, in that it forces a more cost-effective use of existing resources. Use of local human resources is also a more desirable approach from a political and ethical point of view. Self-reproducing schemes are the most desirable of all. Rachlan (1986) discusses the "Human Action Model" which has been developed at the Environment Research Center of the Institute of Technology in Bandung, Indonesia. This model has been applied with success in pilot rural environment development projects. The project was aimed at "significant and efficient use of available inputs to produce optimum outputs and at the continuous use, dissemination, reconstruction and development of outputs by the target beneficiaries to accelerate the achievement of social and economic welfare of, and most importantly instill sense of independency from outsiders in, the rural population" (i).

The mechanism used to disseminate technologies for improving the environment is known as "Horizontal Dissemination of Technology by Vertical Changes of Roles." This method produces

more and more non-paid village extension agents who continuously try to improve their knowledge and practical skills to get better social status in their community. The physical impact seems to justify this mechanism. By spending about 60% of the originally planned inputs the amount of hectareage treated by the ever improved technologies is 12 times as many as originally targeted.... Experience shows that by applying the horizontal dissemination of technology the government monetized inputs decreases at each phase of the dissemination process. At the demonstration phase the government input is purely advice, and at the diffusion phase the government field extension worker visits the farmer group only by request (10).

The full development of this model in the context of African village groups is the research task suggested here. Given the vigour of community level groups in Africa, the prognosis for the effective functioning of a model of this kind should be excellent. The following charts (from Rachlan, 1986: 11) provide a model that could be evaluated for, and tested in the African context. The first chart sets out the process whereby villages become empowered as disseminators of technology; the second shows the four phases: pilot, model, demonstration and diffusion. The Indonesian statistics in this second chart are exemplary of the change in ratio of inputs, from a majority by government in the pilot year, to a majority by villagers in the diffusion year.

1. **HORIZONTAL DISSEMINATION OF TECHNOLOGY BY
VERTICAL CHANGES OF ROLES**

CHANGE OF ROLE					
YEAR	EXTENSION WORKER	TARGET BENEFICIARIES OF			
		1st Year	2nd Year	3rd Year	4th Year
1	2	3	4	5	6
ONE	FACILITATOR	LEARNERS	-	-	-
TWO	MOTIVATOR	FACILITATOR	LEARNERS	-	-
THREE	ADVISOR	MOTIVATORS	FACILITATORS	LEARNERS	-
FOUR	RESOURCE PERSON	ADVISORS	MOTIVATORS	FACILITATORS	LEARNERS

2. **COMPARISON BETWEEN GOVERNMENT'S AND VILLAGERS' INPUTS
OVER THE COURSE OF THE HORIZONTAL DISSEMINATION PROJECT**

YEAR	DEVELOPMENT PHASES	PERCENTAGE OF INPUTS	
		GOVERNMENT	VILLAGERS
1	2	3	4
ONE	PILOT	70%	30%
TWO	MODEL	50%	50%
THREE	DEMONSTRATION	30%	70%
FOUR	DIFFUSION	10%	90%

D. Inventory of Successful Initiatives

This study has made the point that the problem for gender, technology and development in Africa is not a lack of material on the subject, but rather that the material is fragmented, divided among the research/action loci, buried in documents that fail to cross the boundary between one area of expertise and another, and divorced from Africans' knowledge of the problems. Of particular concern to African women is the failure to document successful development initiatives -- a concern which motivated the 1985 Tanzanian Workshop on "Resources, Power and Women" (ILO, 1985; see the discussion of this workshop in chapter two section C). A crucial research task to meet this concern is the development of an inventory of successful initiatives, whether they were aid agency projects or locally devised efforts. Part of this task is development of criteria by which we might measure 'success' (clearly a water supply project that puts a water tap in the village but leaves women more harried than before should be excluded from the definition, for example).

Another dimension of the research is a determination of the time span that should have elapsed before judgement on an initiative's success is rendered. Review of the continuing benefits of a project several years later sometimes reveals a less sanguine picture of the effort's success than appeared immediately after the project's completion. Yet setbacks to an initially successful project should not disqualify it from inclusion in the inventory: useful lessons may be learned from both the positive and negative aspects of the initiative, as the case summary below of the Mraru women's bus service shows.

1. The Nature of the Inventory

Documents of four kinds should be reviewed. The first three comprise material produced by development-oriented research/action loci; the fourth is more specifically academic. First, case studies that capture the struggles of development and the achievements of women in all their rich texture and detail are invaluable for assessing the interplay of social and technical factors in a successful endeavour. These narrative accounts, moreover, would prove particularly useful for women in other villages seeking to pursue similar technological innovations. Second, studies that provide overviews of development efforts in a broad area of technology transfer, such as water and sanitation, are useful for the comparative context and the framework of assessment that they generate. While the first type of study provides detailed analysis but few if any comparisons, the second type of study provides the comparisons without much detail: the two thus necessarily complement each other. A third type of document is the research project which assesses a particular piece of technology, for example mechanical flour milling, and evaluates its development and application in the African context. Academic texts comprise the fourth category of document to be scanned for inventory material: both case studies and overviews should be searched out.

a) Case Studies.

An example of the kind of case study that should be reviewed and catalogued is the initiative of the Taita women of Mraru, Eastern Kenya, to solve their problem of getting their produce to market. Their story, Village Women Organize: The Mraru Bus Service, written and photographed by Jill Kneerim (1980), was published in the SEEDS pamphlet series. The SEEDS series is exemplary of the kind of documentation being called for here. A jointly sponsored project of the Carnegie Corporation, the Ford Foundation and the Population Council, it was developed

to meet requests from all over the world for information about innovative and practical program ideas developed by and for low income women. The pamphlets are designed as a means to share information and spark new projects based on the positive experiences of women who are working to help themselves and other women improve their economic status. The projects described in this and future issues of SEEDS have been selected because they provide women with cash income, involve women in decision-making as well as earning, are based on sound economic criteria, and are working successfully to overcome obstacles commonly encountered. The reports are not meant to be prescriptive, since every development effort will face somewhat different problems and resources. Rather, they have been written to describe the history of an idea and its implementation in the hope that the lessons learned can be useful in a variety of settings. They are also being written to bring to the attention of those in decision-making positions the fact that income-generating projects for and by women are viable and have important roles to play in development (Kneerim, 1980: 1).

The Mraru Women's Group is typical of the self-help groups all over Kenya, with features much like the groups of Mitero described in chapter 4 above. In 1971, the women made the decision to raise funds in order to purchase a bus to carry them to market in nearby Voi town. They were impelled by the difficulties they faced getting a seat on the local bus service, people from more remote villages, and men, usually preempting all the space. Over several years, and with the help of various agencies, as well as the bank, the women succeeded in raising the funds and solving the logistical problems of ordering and purchasing a small bus. The bus entered service in 1975, and for several years made good profits. By 1977, the bank loan was paid off, and substantial savings were being realized. The group invested them in diverse other projects, including a village store and a herd of goats. Meanwhile, they succeeded in managing the technical aspects of keeping the bus serviced and repaired. For some time, their efforts were taken as a model of what women could achieve through their own efforts and on the basis of needs defined by themselves. The life of the village was indeed improved, with its reliable access to Voi (a benefit also for those needing hospital services), and with its women-managed local stores supplies. As well, there were substantial intangible benefits in the form of women's greater voice in village affairs, and the addition of a whole new dimension of organizational skills to their traditional repertoire.

When the bus wore out, however, the Mraru women were left without sufficient capital to purchase a new one at the vastly higher prices of 1979. When the review was written in 1980, they were pursuing several strategies: first, to save the additional 60,000 shillings (about \$6,000) necessary for a down payment, and second, to have the land and buildings they owned in Mraru surveyed so that the shop could be accepted as collateral for a long term loan. The author draws a number of general lessons from both the positive and negative aspects of the Mraru experience, that could usefully be applied in other contexts. One that is particularly important for Kenyan women is that they avoid the proclivity of small businesses to diversify hastily without attention to long-term capital needs (see Marris and Somerset, 1971, for an analysis of this phenomenon in Kenya). In sum:

The Mraru Women's Group has shown unusual creativity and persistence in identifying common needs and organizing to meet them. They have also demonstrated that a small, private organization with few resources can effectively call on the skills and resources of other agencies, both public and private, to help them achieve their goals, while remaining independent and self-reliant (Kneerim, 1980: 1).

b) **Overviews of Development Efforts.**

An example of the second type of study, the overview of technology transfer endeavours, is the briefing document prepared by INSTRAW and UNICEF for the 1985 United Nations Decade for Women Conference (INSTRAW and UNICEF, 1985), on the subject of women and drinking water supply. Referring to the world water supply and sanitation crisis, and the International Drinking Water Supply and Sanitation Decade (IDWSSD) launched in 1980, the document proposes a two-pronged plan of action: first, development of a strategy for "the enhancement of the role of women within the IDWSSD" (21); second, assistance in ongoing activities associated with Decade programmes. Amongst the latter, it proposed that it "initiate and undertake action-oriented research to improve the data base, following identification of specific issues, countries and pilot projects; and that it "promote awareness from community through international levels through collation and dissemination of information and experiences about the stake and potential of women in improved water supply and sanitation" (21).

By way of introduction, the document summarizes efforts in the field by international agencies, including the FAO; the United Nations Department of Technical Cooperation for Development; the United Nations Development Fund for Women; UNICEF; UNESCO; WHO; the United Nations Development Programme; and the regional commissions such as the ECA. The two main parts of the publication are an annex on "strategies for enhancing women's participation in water supply and sanitation activities" -- the recommendations of the inter-agency task force on women and water of the IDWSSD steering committee (23-31); and an annex entitled "Insights from Field Practice -- How Women Have Been and Could be Involved in Water and Sanitation at the Community Level" (32-45).

The latter is the most interesting section for the proposed inventory of successful programmes. It surveys a wide range of water and sanitation projects, and organizes conclusions about their value or inappropriateness

into useful categories. It considers the past and possible future involvement of women in the different aspects of water and sanitation projects: planning at the community level; needs assessment; data collection; design and choice of technology; implementation (construction, and operation and maintenance), monitoring and evaluation; and the special issues of training, and health and hygiene education. As well, the document reviews the broader context of primary health care, women's involvement in the community, and women and development. The section on design and choice of technology is typical of the useful (and sometimes humble) prescriptions that the document has produced. For example:

In reaching technology decisions, full advantage must be taken of women's knowledge in water and sanitation aspects of the environment, including water source and water quantity during dry and wet seasons. Women as water drawers can provide important information. For example...in Panama, women took the engineers to a fresh water source on the shore of the island which had not been found during the feasibility survey....Consulting with women on the design of latrines can often result in simple technological changes which make latrines more acceptable to users. For example, in Nicaragua the latrine was not used by women because their feet could be seen from the outside....(INSTRAW and UNICEF, 1985: 38).

c) Assessments of Specific Technologies.

While many technical assessments ignore or treat simplistically the social factors implicated in the piece technology being reviewed, some may be found which take adequate account of them. These are particularly valuable, because aid policy makers cannot read sociological analyses to put real equipment in place in African villages. Unfortunately, far too much of the criticism of technology transfer has been of a general, sociological kind; the interface between the new material objects and the individuals and communities which are to utilize them tends to be given short shrift. Well researched and organized technology assessments should be sought out, both to provide concrete, detailed information on the technology under consideration, and to provide models of how future assessments may be carried out.

An example of such a document is An End to Pounding: A New Mechanical Flour Milling System in Use in Africa, commissioned by the IDRC (Eastman, 1980). The booklet, which considers several prototype dehullers and grinders designed to produce acceptable flour from both cereal and legume crops, "is not intended to be a comprehensive instruction manual; rather it attempts to review the accumulated knowledge and experience gained during the development, testing and operation of the several mills referred to" (5). The dehuller that is singled out for its special merits in the context of societies in Africa's semi-arid tropics is prototype designed in Saskatoon and later modified in Botswana. The booklet begins by discussing the need for a special milling system for the semi-arid regions of Africa, in which millet and sorghum are the human staples, pointing out the problems with traditional flour-making methods, and listing various environmental and economic factors contributing to the need. "The most convincing reason for developing a simple, dry mechanical milling process is that people in the Third World want

it. In a survey done in several villages in Senegal, the three most desirable additions to village life were reported as a reliable water supply followed by grinding and dehulling facilities that would produce an acceptable product from local grains" (8).

The study proceeds to discuss development of the technology, giving an account of the first pilot mill in Maiduguri, Nigeria. Following purely technical sections on the dehuller and milling systems, focussing on their suitability for the cereals of semi-arid areas, the booklet gives guidelines on planning a mill. Two types of mill are considered, a continuous flow mill which would serve a large market area and operate as a regular factory, and a service mill, designed to process the produce of local growers, for their own consumption. Eleven planning steps are proposed for the latter: these include analysis of grain production and consumption patterns; selection of appropriate sorghum growing areas; conducting a mill utilization survey; testing existing grain and flour samples to ensure a popular flour from the mill; choosing a mill site; and budgeting, financing and implementing mill construction. The final section, the most important for our purposes, evaluates the milling systems discussed in the previous sections. On the basis of a number of technical, economic and social factors, the service mill is suggested as more appropriate than the continuous flow mill in many rural contexts (the latter being of value to provide food supplies for urban populations).

Mill planners must recognize that mechanical milling is apt to cause some changes in a society. For example, in many rural communities, much of the social interchange revolves around routine household tasks such as dehulling and grinding cereal. A continuous-flow system may remove this focus for community socializing, whereas a service mill provides the opportunity for social interchanges. In addition, if a continuous-flow mill is functioning with full community support, the local economy is based on trust -- trust that the grain that is sold now will be available later in the form of flour. Service processing does not require the same degree of performance from or confidence in the mill and in the marketplace (Easton, 1980: 43).

d) Academic Texts.

In addition to surveying the two types of development-oriented studies described above, the inventory of successful programmes should also review the more strictly academic literature for cases, and for overviews of projects. The corn mill societies in Cameroon, whose success is chronicled in African Women South of the Sahara (Wipper, 1984: 75-76; see chapter 3 B.1), and examples throughout section D of chapter 3, are evidence of the value of this literature. These cases are often amongst the most interesting, because they are set in social science analyses, and often in the context of feminist critique. Overviews written from an academic perspective are also valuable, in that they provide a critique that is independent of allegiance to commissioning agencies or governments. Barbara Rogers's book, The Domestication of Women (1980 -- see footnote 4 in chapter 2) is an example of a hard-hitting analysis of the aid process and its impact on women, with evidence from a number of specific development cases.

2. Research Tasks for Creating the Inventory

The following tasks emerge from the concerns raised above and in other parts of the monograph, and from consideration of the nature of the material to be included in the inventory.

i) Set the criteria by which a project or initiative will be judged successful (does the project treat women as central actors? Is the community adequately involved as a collective decision-maker? Does the interface between the material technology and women's physical and social attributes, preferences, needs etc. work smoothly? Is the technology sustainable at the village level, particularly in terms of women's knowledge and work patterns? Does the technology transfer enhance, or at least sustain women's authority and autonomy in the community? etc.).

ii) Determine timespan to be examined. On the basis of case reports which cover a number of years and identify the point at which problems appear, such as the Mraru study, establish guidelines according to different types of technology transfer. Where otherwise useful cases do not include an adequate time dimension, it may be considered worth while in certain circumstances to conduct a follow-up assessment in the field (see below).

iii) Systematize information from the initiatives researched according to the four types of documents described above: case studies; overviews of development efforts; assessments of specific technologies; and academic texts. Case studies should be identified according to whether they were agency-initiated, community initiated or government initiated, to determine the possibility of a correlation between the origin of the initiative and its success.

iv) Where the time span covered is not adequate to evaluate the long term success of the initiative, or where inadequate information has been given in terms of the established criteria for success, follow-up investigation in the field should be considered.

v) Eventually, specific field research should be designed to recover information regarding initiatives that have escaped the attention of aid agencies, governments or academics. This is likely to be particularly true of community-initiated efforts.

vi) Conduct research on how to disseminate the inventory, for wide use amongst research/action loci and communities. The inventory, or parts of it, could be compiled in different ways according to the desired audience. For example, the inventory might be presented in a more narrative form for community groups. Where the inventory has revealed comparable social and economic problems in the application of two different types of technology, a partial inventory that includes both types could be constructed, so that villagers concerned with one type of technology could benefit from the lessons learned regarding the other type. A computerized inventory could, indeed, be used to generate custom-made part-inventories for specific communities or research/action loci.

E. Transforming the Aid Expert/Aid Recipient Relationship: An Exercise in Applying Theory

I have identified a crisis in knowledge about Africa, and in particular the epistemological dilemma regarding Africans' alienation from their own knowledge of themselves, African women being the most alienated of all. The task of addressing this dilemma is a huge and daunting one, but a start can be made that has practical value for aid efforts. The relationship between aid expert (as scholar or practitioner, whether African or foreign) and aid recipient (as individual or community) is a transfer point of both power and knowledge: as such it provides a distinct object of inquiry, around which a number of the problematic issues of development policy can be brought into play. Most importantly, the conditions for the presence or absence of locally generated knowledge about development problems may be illuminated by such research. The aid expert/aid recipient relationship is thus suggested here as a topic of research; at the same time, the discussion below is an exercise in applying theory to practical aid issues. The argument, and the suggestions for research that follow, proceed by way of reference to the general problems in knowledge about Africans as aid recipients, rather than through specific reference to women at every point. Implicit throughout, however, is the general purpose of this monograph: to elucidate the problems for women, technology and development in Africa.

1. Thinking about theory

The context for conceptualizing the aid expert/aid recipient relationship as an object of enquiry is, once again, the thinking of Michel Foucault (see chapter 5 section [e] for a preliminary discussion of his work). While it is difficult to characterize his ideas without caricaturing them, one may make the general statement that he has, through his "genealogies" of contemporary cultural practices, diagnosed a trend towards more and more pervasive organization of society. As the excellent commentators on Foucault, Dreyfus and Rabinow (1983), put it, this comprises

the increasing ordering in all realms under the guise of improving the welfare of the individual and the population. To the genealogist this order reveals itself to be a strategy, with no one directing it and everyone increasingly enmeshed in it, whose only end is the increase of power and order itself (xxvi).

Although there are other ways of interpreting contemporary history, and other thinkers, such as Nietzsche, Weber and Heidegger have interpreted it this way before Foucault, his special contribution is his focus on the link between "the most minute social practices" and the "large scale organization of power". He argues that human beings have, in the last two centuries, been increasingly constructed as subjects and objects of knowledge, elaborating his argument via several powerful examples, including the evolution of penal institutions and the development of modern ideas about sexuality, to cite two of them (see Foucault 1979; 1980a). These examples "show us how our culture attempts to normalize individuals through increasingly rationalized means, by

turning them into meaningful subjects and docile objects" (Dreyfus and Rabinow, 1983: xxvii).

Following his thinking, we can observe that first colonialism and then the international aid effort required that the colonized and later aid-dependent peoples become objects of knowledge in a new way, so that they could be categorized and rendered manageable -- first as colonial subjects, and subsequently as aid recipients.¹ Given our own immersion in the western system of knowledge, it is hard for us to stand back and recognize the degree to which what is known about Third World peoples, how it is known, and how much, is not what they have known about themselves: the very categories we employ, the systematization and generalization of knowledge about them, are all a product of our own will to knowledge, rather than theirs. This knowledge is, moreover, at one and the same time a product of the power relations between west and Third World, and a shaping force in those relations.²

Foucault is "frustratingly elusive when it comes to capturing our current condition in general formulae" (Dreyfus and Rabinow, 1983: xxvi). But his refusal to give us a grand theory is consistent with the conclusions of his analysis: "Once one sees the pervasiveness, dispersion, intricacy, contingency, and layering of our social practices, one also sees that any attempt to sum up what is going on is bound to be a potentially dangerous distortion" (xxvi). Another problem in applying his ideas lies in the interpretive nature of his work:

Foucault says that he is writing the history of the present, and we call the method that enables him to do this interpretive analytics. This is to say that while the analysis of our present practices and their historical development is a disciplined, concrete demonstration which

¹ The synopsis of the World Bank's 1986 report on Africa in Chapter 2, section A of this monograph, and particularly the quotation on page 23, exemplifies the overt aim of aid discourse to construct manageable populations of aid recipients. Governments are called upon to create a "social consensus" around the World Bank's family planning, resource and agriculture policies. What will create a compliant population is, quite explicitly, acceptance of the World Bank's understanding of development problems, and it is African governments' responsibility to inculcate this understanding.

² This is not to argue that western aid is devoid of deep altruism. As Foucault says, within the grand strategies by which history proceeds, the 'inventors' of tactics are "often without hypocrisy" (1980: 95). It is instructive to remember, however, that colonialism was animated by a powerful discourse of altruism, expressed (and eventually caricatured) as the "White Man's Burden." For a critique of the aid enterprise as an indispensable tactic of contemporary economic imperialism -- a new version of the "White Man's Burden" -- see Cheryl Payer, The World Bank: A Critical Analysis (1982).

could serve as the basis of a research program, the diagnosis that the increasing organization of everything is the central issue of our time is not in any way empirically demonstrable, but rather emerges as an interpretation. This interpretation grows out of pragmatic concerns and has pragmatic intent, and for that very reason can be contested by other interpretations growing out of other concerns (xxvi).

To bring this problem into the context of thinking about development: critics such as Mbilinyi (1985a; see chapter 5[d]), whose pragmatic concerns lead them to interpret colonial discourse, for example, in a particular way, could find a challenge from the position of quite different concerns -- male dominated postcolonial elites, for example -- which insist on interpreting the same evidence differently. 'Interpretive analytics' are always open to such challenges.

In spite of this and other problems in Foucault's work (such as a concept of power which is ultimately so inclusive as to weaken its utility), the insistence on standing back from our own systems of meaning creates refreshing possibilities for tackling the epistemological dilemmas at issue here. Precisely because it is an interpretive method, it is useful for drawing 'local knowledges' out from under dominant systems of thought. Minson (1985) tells us succinctly what we should and should not do with Foucault's theory:

The most appropriate respect for Foucault need not necessarily consist in devotedly awaiting and consuming his every last word on every subject. There is something absurd in Foucault's intellectual heroisation. His enduring value will, I believe, be found to lie in a series of quite unspectacular suggestions (including some instructive errors) on a limited set of theoretical, historical and political questions....To my mind, the most appropriate tribute [to his memory following his death in 1984] is on the one hand unremitting critical attention to his arguments, whilst on the other hand, producing arguments of one's own in the areas he has done so much to open up (Minson, 1985: ix)

To demonstrate the utility of Foucault's approach for our purposes, while suggesting a concrete programme of research regarding the aid expert/aid recipient relationship, I draw on his concept of "'local centers' of power-knowledge" (Foucault, 1980a: 98). He argues that in discourse, objects of scientific inquiry are not external to the "economic or ideological requirements of power." For example, in the discourse on sexuality that has developed since the eighteenth century:

If sexuality was constituted as an area of investigation, this was only because relations of power had established it as a possible object; and conversely, if power was able to take it as a target, this was because techniques of knowledge and procedures of discourse were capable of investing it (98).

'Local centres' of power/knowledge are the nexus of this intertwined process. Examples of 'local centres' are "the relations that obtain between penitents and confessors, or the faithful and their directors of conscience. Here, guided by the theme of the 'flesh' that must be mastered, different forms of

discourse -- self-examination, questionings, admissions, interpretations, interviews -- were the vehicle of a kind of incessant back-and-forth movement of forms of subjugation and schemas of knowledge" (98). The relation between medical professionals and their patients is another such 'local centre' that has emerged in the last several hundred years, and which is now a particularly potent force in contemporary society throughout the world.

I propose that the aid expert/aid recipient relationship is precisely such a 'local centre' of power/knowledge: a key point in the technology transfer process and, more broadly, a significant site of the formulation of both power relations and knowledge about the aid recipient. To adapt the above quotation, the recipient of development aid was "constituted as an area of investigation" because "relations of power had established it as a possible object." Conversely, people and communities could become a target of power relations because "techniques of knowledge" had developed which could construct them as 'aid recipients'. In other words, knowledge about African peoples as aid recipients constructed during the aid process in turn is used to inform, organize and expand aid both as a discourse of development and as a set of practices. A concrete example of this process can be found in Rogers's discussion of the World Bank's Lilongwe Land Development Program (referred to in chapter 5 section 3 [b] -- see Rogers [1980: 120-38]). Here, shows how knowledge about matriliney is constructed out of the relationship between the aid expert -- the World Bank -- and the aid recipient -- matrilineal Malawians. This knowledge of matriliney as 'socialistic' and 'matriarchal' is then used to shape appropriate (i.e. anti-matrilineal) policies; as well, it provides the matrix (or "grid of intelligibility") into which any further information about kinship is inserted. The discourse and practice of development in the Lilongwe project thus both act to suppress matriliney, and seriously to undermine women's rights and control of resources.

Aid is a particularly powerful example of the permeation of new relations of power/knowledge throughout societies because of the overt, intentional and massive nature of the enterprise. The transformation of penal institutions and of ideas about the criminal explored by Foucault in Discipline and Punish (1979) was piecemeal and followed no overt, global strategy (although the outcome is a global approach to prisons and to prison reform). By contrast to this and other social practices Foucault has examined, aid is premised on a massive and obvious disequilibrium in scientific knowledge between the giver and the receiver, which is to be at least partially redressed by the aid process. While it is possible to argue that the body of knowledge which informs penology and our current understanding of criminality is a pseudo-science (or at least a 'dubious science'³), and even that much of the supposedly objective knowledge about Africa is 'pseudo-scientific', there is an irreducible core of technical and scientific knowledge implicated in technology that cannot be wished away by critiques of development discourse.

³ See Dreyfus and Rabinow, 1983: 162-67 for a discussion of thinking about the inherent contradictions that make it impossible for the social sciences to be 'normal science', in the sense of physics or astronomy.

Moreover, no liberation of subjugated knowledges can redress the inequality in relations of power/knowledge that is based on this irreducible core. Our task of transforming the aid expert/aid recipient relationship requires us to identify that which is truly superior knowledge, and that which is ideology or poor science masked as superior knowledge.

What is the intellectual process whereby insights developed in a quite different empirical context appear as relevant and useful for the study of development aid in Africa? Applying theory always proceeds in part on intuition, as most scholars will attest: the interconnections do not necessarily emerge at the level of linear reasoning. In the case of Africa on the one hand and women on the other as objects of inquiry, thoughts about the relations between power and knowledge appear as obviously useful, given the overt systems of domination in which Africa in general and women in particular are enmeshed. Africanists -- both indigenous and foreign -- have reflected for many years on the history of knowledge about Africa (see for example Basil Davidson's eloquent critique in The African Genius [1969: 17-31]). A primary impetus for twentieth century feminism has been the recognition that knowledge about women and gender relations is entangled in male-dominated systems of power.

I have chosen the ideas of Michel Foucault here as an exercise in the imaginative application of theory, but there are other philosophical and sociological traditions that might fruitfully become the object of 'hunches' about new possibilities for research. The most developed current model for the dual process of critique and application of theory is the thorough-going debate of the past twenty years about the relevance of Marxist thought for the study of Africa. The consequence has been a rich and heterodox adaptation of Marxist method and theory to illuminate African political economy. the fruitful results of this exercise, specifically within feminist political economy, have been referred to in parts I and II of the monograph.

It may appear contradictory to be suggesting yet further use of western scholarly traditions to elucidate the African condition, given the strongly argued point about subjugated knowledges. The contradiction is only an apparent one, however. The key here is that useful theories and methods, not empirical homologues, are being identified (by contrast, for example, to the political science of the early 1960s that described new African political institutions as variants of the American or European systems -- see the influential Almond and Coleman, 1960). The solution for subjugated knowledges cannot simply be a geographic one, as Africans themselves are the first to attest. The utility of a theoretical framework is precisely the space it provides for identifying and rectifying culturally relative, ethnocentric and sexist explanations of non-western societies. This utility does not depend upon whether the theorist addressed non-western society or not (Foucault did not do so in any substantial way), nor does it even depend on the theorist being free of empirical error and ethnocentrism if non-western society has been addressed (Marx's writings on India are regarded as Eurocentric and incorrect [Katz, 1987]). The point is that both theorists offer Africans the tools to critique non-African knowledge about Africa, and to place it in a historical context. It is no accident that Marxist thought has proved so attractive to African critical thinkers; it will not be surprising to find

African scholars engaging in discourse theory and applying Foucault's thought in a substantial way in coming years.

The aid expert/aid recipient relationship is but one possible area for applying ideas about discourse (and one of the most important for the present task of elucidating the problems of technology transfer and gender). There are other objects of aid-related inquiry which may be submitted to scrutiny, such as the concepts of population and health. For anyone familiar with current western preoccupation with birth rates in the Third World, the following statement about the changing politics of health in the eighteenth century will seem in many ways apt for our own time:

The great eighteenth-century demographic upswing in Western Europe, the necessity for co-ordinating and integrating it into the apparatus of production and the urgency of controlling it with finer and more adequate power mechanisms cause 'population', with its numerical variables of space and chronology, longevity and health, to emerge not only as a problem but as an object of surveillance, analysis, intervention, modification etc. The project of a technology of population begins to be sketched: demographic estimates, the calculation of the pyramid of ages, different life expectations and levels of mortality, studies of the reciprocal relations of growth of wealth and growth of population....The biological traits of a population become relevant factors for economic management, and it becomes necessary to organise around them an apparatus which will ensure not only their subjection but the constant increase of their utility (Foucault, 1980b: 171-172).

This is not to argue that high birthrates pose no real danger in Africa: rather, it is to indicate that it is one of western aid's most important projects to define and manage African peoples as 'populations', and as the wilful authors of a paramount economic problem for Africa, "the continent's troublesome population trends" (Sai, 1986: 130). This aspect of development discourse has proved one of the most politically sensitive and controversial amongst Africans and African governments.

2. Applying theoretical insights: six hypotheses about the aid expert/aid recipient relationship

The following hypotheses are suggested by the application of discourse analysis to the development literature, and to commentaries on development policies. The hypotheses draw on many of the conclusions reached in the preceding chapters. These hypotheses could be useful in shaping questions about the premises underlying aid research and policy, in the context of studying individual cases, or of studying a genre of aid projects (such as health technology transfer, or agricultural extension work). I do not suggest that all aid projects are informed by this development discourse, nor that the aims articulated by the discourse are necessarily inappropriate or wrong. Rather, I suggest that the source of many of the problems with aid efforts that I have identified in this monograph is the construction of a particular kind of knowledge about the problems and their solutions, and in particular about the relationship between aid expert and recipient.

a) Individuals are constructed, both at the level of general aid policy and at the level of individual projects, as a collectivity of 'resources' to be mobilized for development. Thought of this way, people in developing countries cannot easily be envisaged as active decision-makers regarding development policy: 'resource' conveys the meaning of an essentially inanimate object, part of a system where useful and unusable elements are decided in advance. The only possible participation for people as 'resources' is acquiescence to a predetermined vision of their problem and its solutions.⁴ The dilemma is particularly poignant for African women, whose active agency in their own societies has been ignored or trivialized since colonial times. The notion of aid recipients as 'resources' has come to the forefront in the present era of economic constraints and crises: in more prosperous 1970s, which allowed a less cost-conscious approach, aid recipients were referred to more often as 'beneficiaries' -- another passive definition, which construed developing peoples as recipients of largess. The discussion of women as 'welfare' subjects in chapter 3 (issue 5) addresses a concrete aspect of the problem of thinking about Africans as passive recipients of aid.

b) A more negative conceptualization of African peoples can be found in much of the discussion about economic growth. Once growth is taken as a self-evident good, as it is in most development thinking, any factors that do not contribute to the preconceived pattern of growth are inevitably in a position of logical opposition to that growth, i.e. they become 'obstacles to growth' or 'constraints on growth'. People's problems, people's attitudes, and

⁴ Here, Foucault's concept of 'bio-power', developed in the context of his analysis of transformations in western society over the past two hundred years, is particularly relevant. Beginning in the eighteenth century, "there was a rapid development of various disciplines -- universities, secondary schools, barracks, workshops; there was also the emergence, in the field of political practices and economic observation, of the problems of birthrate, longevity, public health, housing, and migration. Hence there was an explosion of numerous and diverse techniques for achieving the subjugation of bodies and the control of populations, marking the beginning of an era of 'bio-power'" (1980a: 140). This description is readily applicable to the Third World in the second half of the twentieth century. On the promulgation of the notion of humans as 'resources' for the developing nation, we again find Foucault's thinking about western society useful. Regarding the emergence of the modern state and the conversion of politics into "bio-politics", "from the idea that the state has its own nature and its own finality, to the idea that man is the true object of the state's power, as far as he produces a surplus strength, as far as he is a living, working, speaking being, as far as he constitutes a society, and as far as he belongs to a population in an environment, we can see the increasing intervention of the state in the life of the individual" (Foucault, lecture delivered at Stanford University, 1979, cited by Dreyfus and Rabinow, 1983: 138). In our context, such intervention is not by the state alone, but by an entire international apparatus set in motion to recruit humans as resources for development.

sometimes people themselves, are among the obstacles to be addressed by development aid policy. 'Resource' at least connotes an inherent value in a developing country's populace; 'obstacle', on the other hand, devalues the humanity and distorts the problems of the very people aid is supposed to support. Occasional concessions to local rationality ("Poor people in Africa, as elsewhere, find it in their interest to have large families" -- World Bank, 1986: 26) do little to mitigate the negative and punitive approach to aid recipients' own choices found in so many aid documents. This hypothesis is intimately linked to the problem of conceptualizing 'the traditional' as a timeless pole of the tradition/modernity dichotomy, discussed in chapter 5 section 3(d).

c) Where recipients are not talked about as collectivities -- 'population', 'resources' or 'obstacles', they are constructed as 'targets' of aid policy. In many cases, it is the individual rather than a community that is the target. Indeed, Africa's traditional patterns of collective economic activity -- with regard to land tenure and use, for example -- have been seen as an obstacle to development; as a consequence aid policy fostered the individual at the expense of the collectivity (see Leonard, 1986: 198). Yet, as current development thinkers themselves admit, "it is now clear that these conceptions greatly underestimate the adaptability of collective land tenure systems.... 'Traditional' systems have not in fact inhibited agricultural development.... There are few costs and many benefits to land tenure systems under the control of local communities" (Leonard, 1986: 198).⁵ The aid policy problem goes deeper than the distaste for dealing with communities: the very notion of human lives that find their primary identity and expression as inseparable elements of a community is foreign to most western thought. That this epistemological problem is an urgent one for aid research and policy is substantiated in numerous instances throughout the monograph.

d) Individual aid recipients are not only 'targets' of development policy: they are problematic targets. The problematization of women's attitudes and practices is a common feature of project analyses, even where the intent of the project is a laudable involvement of women in the development effort. Getechah's useful assessment of Kenyan women's role in water development discussed in chapter 2 section A is nevertheless symptomatic of the treatment of aid recipients as problematic. Her discussion of women's possible contribution to water supply projects is set in "conditions of poverty, ignorance, and lack of technical know-how among rural women" (1981: 86). Women lack "self-reliance", which paradoxically is to be instigated from above (this paradox, and the struggle surrounding it, is at the heart of the movement in Kenya to prod rural women into self-help groups). Where groups are genuinely 'self-help', i.e. originating locally out of women's collective needs and practices, they often fall outside the net of administrative control

⁵ Note that the language still poses the question of land tenure in strictly economic, rather than social or ethical terms.

and aid. As such, they are either ignored or treated as targets for 'assistance', to be drawn into the management net.⁶

The notion of a lack in the qualities of aid recipients has as a necessary correlate the notion of 'potential' ("Although the women are making a substantial contribution, their potential has not been fully exhausted" -- Getechah, 1981: 87). Thus, even though recipients are problematic, they also provide an empty slate of unfulfilled 'potential' upon which the latest fads in development aid can be written, from the 1950s preoccupation with promoting the virtuous, cleanly housewife⁷; to fostering the creative, income-generating craftswoman; to creating the fuel-efficient, tree-planting environmentalist; to restoring the nurturing, breast-feeding earth mother. Once again, I am not denigrating the goals associated with these images: rather, I am seeking to expose the degree to which development discourse is based upon such imagery, which often has more to do with western political or cultural preoccupations than with the real needs of the women concerned.

e) In sum, recipients, as communities or individuals, are constructed by development discourse as subjects to be managed, whose input is limited to "feedback to the research system" (Leonard, 1986: 197). The site of interaction is 'extension', a term with a venerable history in western agricultural development that poses particular problems for understanding the development task in the Third World. The aid expert/aid recipient relationship, which is the most crucial point of transfer for both technology and other aspects of development, becomes an outpost of a system, a frontier, whose boundary is the extension worker, and on the other side of which is the aid recipient. The World Bank's Training and Visit System of agricultural extension (T & V), which appears to be one of the most acclaimed solutions to the problems of agricultural development, nevertheless epitomizes the construction of the aid expert/aid recipient relationship as a 'management system.' (see World Bank, 1983: 94-95 for a description). "A highly disciplined approach to extension management," the T & V system is "the best available solution to these management demands" (Leonard, 1986: 196-97).

Even the excellent model for the dissemination of technology presented in section C above succumbs to the concepts of 'resource', 'target' and

⁶ The National Film Board of Canada's Studio D team that filmed Forum '85, (a documentary entitled "Speaking of Nairobi") could be forgiven their perplexity at my answer to their question about what "project" the Mitero village women's enterprise was a part of. Given the 'project' hype at the Nairobi Forum, they had to work to grasp the local nature of the group effort whose celebration they attended.

⁷ "It is most difficult for an African housewife to keep her floors in such a condition that she can always have beautiful mats on them" (Esther Koeune, The African Housewife and Her Home, 1983 [1952]: 46). It is instructive that this book has been in print since its first publication in 1952. Revised in 1961, it has been reprinted six times since by the government publishing house, the Kenya Literature Bureau.

'beneficiary'. Obviously, aid programmes by their nature are 'systems' that extend information and technology from an area where these are known to an area where they are unknown. What I am suggesting here is that researchers and policy makers should be more aware of the power relations and domination over local knowledges entrained in this logic of dissemination.

f) Women's knowledge is invisible in development discourse. Anthropological studies have shown that production and use of knowledge in Africa has large areas that are gender specific. In the older anthropological literature this fact emerged by default, as evidenced, for example, by the following astonishing entry in Lambert's study of political institutions amongst the Kikuyu: "Men say they do not know for certain whether...gatherings of women are merely called for specific purposes or whether they are ad hoc committees of permanent and organized chiamas [councils]" (1956: 96). Like many social scientists, Lambert was content to leave women's areas of knowledge in the shadows, reported vaguely by male informants (the idea of interviewing women directly did not seem to occur to him).

Development studies have continued the tradition, so that women's knowledge about family, agriculture, health maintenance, nutrition, and associated technologies has never been systematically solicited and analysed. Consequently, aid projects have been built on erroneous and incomplete knowledge, as many examples throughout this monograph reveal. Male-dominated aid institutions and governments seek out male knowledge in the 'local centres' of power/knowledge, thereby unwittingly reinforcing male domination, disrupting the local relations of power/knowledge, and creating the alienation of women from the development process. The incomplete male knowledge structure is taken to stand for local knowledge in its entirety. Women's knowledge, if it is thought about at all, is considered as part of a private realm outside the purview and jurisdiction of the aid project, a type of knowledge on a par with a stereotypical western housewife's knowledge about which laundry detergent or diaper to use. The suppression of women's knowledge, and the distortion of the local relations of power/knowledge, is one of the most tragic consequences of western aid as it has been practised in Africa over the last thirty years.

3. Research tasks for the transformation of the aid expert/aid recipient relationship

The theoretical exercise outlined above only has value (beyond its possible contribution to scholarship) if it provides a means first for a sharper understanding of inappropriate aid policy and practice, and second a means for transforming such policy and practice. By engaging in what Althusser calls a "symptomatic reading" of texts (1977: 253), we have generated in the above hypotheses a set of concrete ideas about how knowledge of development problems is structured. Testing the hypotheses against existing aid projects, and using them to inform the design of future efforts, may open the way to a transformed aid expert/aid recipient relationship. The following are some suggested research tasks:

a) A survey of those aid efforts that have taken account of local knowledges and local agency, not just with regard to women, but with regard to community

decision-making structures and practices. A starting point would be a review of the literature in each research/action locus. Some development agencies have made a particular effort to survey and assess such efforts: the IDRC's study, Coming Full Circle: Farmers' Participation in the Development of Technology (1984) being a notable example. The survey should seek out in particular those studies such as the above that emphasize participatory research. The survey should schematize proposals for and experiences with such participation, evaluate the nature of the aid experts' knowledge about the aid recipient, and explore how they utilize and characterize local knowledges. In thinking about women as aid recipients, it is necessary but not enough to review the position papers and proceedings of all the WID conferences, as these all too often merely give prescriptions, backed by brief summary statements about projects (see, for example, the paper by INSTRAW and UNICEF on women and the international drinking water supply [INSTRAW, 1985]. This document is discussed in section D above).

b) The extraction and codification of key principles for a transformed aid expert/aid recipient relationship from the documents identified in the above survey, both specific cases, and overviews such as Coming Full Circle. The boundary problem has ensured that the insights from the few good studies that have emerged seldom circulate beyond the specialists in the field surveyed. The IDRC study on farmers' participation cited above may be taken to exemplify the possibilities for crossing the boundary. Amongst a number of other useful tasks, the study presents and assesses the "research-development-production" (RDP) approach to agricultural development, in which "farmers' participation is required, first, in diagnosing the problems, second, in designing technical improvements, and, third, in using and evaluating the innovations" (IDRC, 1984: 12). RDP comprises three categories of methods. The first is evaluations that arise from close collaboration between experienced researchers and farmers, and that "take into account relationships between the ecological and technical environments, between techniques and farming systems, and between techniques and societies." The second category of methods is experiments that do not rely on research station methodology, but that develop techniques and statistical tools for farmer-managed tests. "Some researchers consider farmer-managed tests an extension of experiments started on the station; others see them as the beginning of experiments -- the true framework for dialogue with the farmer. The tests...provide information about actual production and consumption at the level of the plot, the farm, the rural community, and the country." Third, "adoption, extension, and adaptation" involves the precise adaptation of innovations developed both on the farm and in controlled environments to other localities and types of production (IDRC, 1984: 12-13).

In this example, the proposed codification of principles for research and policy would take the three categories of methods and create generalizations that could be applied in other contexts. For example, agricultural programmes that focussed specifically on women farmers could include in the first category of methods an evaluation of the knowledge about techniques, soil conditions etc. that is specific to women, and an assessment of how this gender-specific knowledge may be drawn upon and integrated with techniques proposed by aid experts. With regard to the second category of methods, farmer-managed tests could be specifically designed to take account of the

opportunities and limitations presented by the female farmers' multiple responsibilities and daily schedule. Again, with regard to the third category of methods, research could be designed to ensure the collection of data on the implications of a particular innovation for women's farming activities.

Beyond the agricultural setting, the RDP approach could be assessed for its adaptability to the health technology field. The emphasis on participation and dialogue, and on the need for a recipient-centred testing and evaluation, would provide a salutary shift away from the treatment of health care recipients as passive individual objects of research and service delivery. This task is likely to be a difficult one, given the much less obvious 'expertise' of the health-care recipient in comparison to the farmer, and the specialized nature of medical knowledge. Regarding research methodology itself, as a parallel to the farmer-managed tests, medical research methodology could be weaned from a hospital orientation and adapted to rural clinics and to the abilities and knowhow of paramedics, traditional healers, and midwives.

c) A critical examination of the discourse of development underlying selected projects, with the projects being viewed as 'local centres' of power knowledge. Much is made of the importance of identifying and replicating success, and rightly so; no attention is paid to the instructive value of poor policy and research. Feminist and other critics of aid projects tend to make general condemnations and not to explore in detail how and why a particular aid policy is poor and is implicated in an inappropriate exercise of power over the recipients (whether by the foreign aid experts or by the recipients' government). The critical examination should attempt to make links between project failures and the framework of knowledge in which the project was initially embedded. This task is not as eccentric as it may seem: the mistakes in development research and aid policy, so often repeated, are destined to further repetition unless a clearer and more systematized understanding of the mistakes is created. Ultimately, this task could yield a document cataloguing and explaining problems in approaches to development aid.

d) The formulation of alternative conceptions of the aid expert/aid recipient relationship through a survey and analysis of research projects that are premised on local empowerment. African women's research/action loci would appear to be the best candidates for such research. The Women's Research and Documentation Project of Tanzania (WRDP), for example, might serve as a model. Begun as a small study group of academic and non-academic women in 1978, it was constituted as a part of the University of Dar es Salaam's Institute for Development Studies (IDS) in 1980. "Fundamental differences over principles of organization" between the group members and the male majority of IDS, as well as efforts "to hijack the funds and equipment which the group had succeeded in acquiring," led to departure from the IDS and the formal constitution of the WRDP in 1982 (Mbilinyi, 1985b: 75-76). Now an affiliate of the International Council of Adult Education Women's Programme and of the African Adult Education Association, the project exemplifies the lessons to be learned about the struggle to establish women-directed and women-centred development research. Priority is currently being given to a life history project that relates the experience of social change and development problems to personal lives. The WRDP has as a central tenet of its research and action

the involvement of ordinary Tanzanian women in the research and development process (see the summary of the WRDP's objectives and activities in Canadian Woman Studies, 1986: 67-68).

e) The recovery of women's knowledge is an urgent research task for the development effort. The above-cited WRDP history project is one very excellent method. Other types of fieldwork should also be called upon: contemporary African history and sociology should be explored for useful methodology. Feminist scholars in particular have developed field techniques useful for researching women's knowledge. As well as new fieldwork, the task should encompass a thorough survey of published ethnologies to extract information regarding individual societies, systems of male and female knowledge, and the actual content of women's knowledge. The recovery of material from fieldwork done in the past need not stop at published documents; living ethnologists may be solicited for relevant material in their unpublished research notes.

A model for the research task suggested here is a document on population in East Africa written a number of years ago: Angela Molnos's four-volume Cultural Source Materials for Population Planning in East Africa (1972-1973). The first volume reviews socio-cultural research between 1952 and 1972; the second deals with innovations in East African societies, in particular with regard to family planning. Part two of volume II surveys these themes in twenty eight East African ethnic groups; the third volume deals with the traditional beliefs and practices of these groups. The survey of the groups forms the empirical core of the study. The fourth volume comprises a bibliography by ethnic group. In addition to reviewing published texts for the project, Molnos solicited contributions from thirty seven social scientists. Many were the original ethnographers of the twenty eight groups (for example, Philip Gulliver for the Turkana of Kenya and Monica Wilson for the Nyakyusa of Tanzania), but they had not written about fertility, attitudes to children and other factors specifically relevant to population planning. Indeed, as a consequence of Molnos's solicitation, we now have a unique body of comparative material focussed on gender relations which would otherwise have been lost in the heads and unpublished notes of major anthropologists.

One central element in the document's success was the careful selection of the anthropological contributors. Molnos sought out those whose fullness of field work and interest in issues of social process in the family would render them most likely to have answers to her questions in their raw data. Another aspect of its success was the meticulous methodology she devised for ensuring an enthusiastic and systematic response from her contributors. Her effort, sponsored by the University of Nairobi's Institute of African Studies and funded by the Ford Foundation, ranks as one of the brilliant, unsung efforts in applied social science.

* * *

A central dilemma lies at the heart of efforts to transform the aid expert/aid recipient relationship. By the very nature of aid, there is a giver and a receiver. Yet as the above exercise -- and the monograph as a whole -- has shown, the constitution of African people as recipients by the

aid process has entailed conceptualizing them as passive targets; as obstacles; as beneficiaries who are somehow receiving a handout for which they have not worked. How to continue giving while rethinking the way the gift is given, and while turning the receiver into a genuine partner in the transaction? With regard to women and technology transfer in Africa, we may only find a solution through the insights of those African women and men who have struggled with the question themselves.

REFERENCES

- Afejuku, D.H. 1980. "Equal Opportunity and Infringement in the Contractual Right of the Nigerian Woman," in F.I.A. Omu, P.K. Makinwa and A.O. Ozo, eds. Proceedings of the National Conference on Integrated Rural Development and Women in Development 11. Benin City: CenSCER. Cited in Andrew Onokerhoraye. 1984. Social Services in Nigeria: An Introduction. London: Kegan Paul.
- Afonja, Simi. 1986a. "Changing Modes of Production and the Sexual Division of Labor Among the Yoruba," in Eleanor Leacock, Helen Safa and Contributors. Women's Work: Development and the Division of Labour By Gender. South Hadley, Massachusetts: Bergin & Garvey Publishers.
- Afonja, Simi. 1986b. "Land Control: A Critical Factor in Yoruba Gender Stratification," in Claire Robertson, and Iris Berger, eds. Women and Class in Africa. New York: Holmes & Meier.
- African Training and Research Centre for Women (ATRCW). 1985a. "Women and Development Planning: An African Regional Perspective," in Gideon S. Were, ed. Women and Development in Africa. Nairobi: Gideon S. Were Press.
- African Training and Research Centre for Women (ATRCW). 1985b. "Women and the Mass Media in Africa: Case Studies From Sierra Leone, The Niger and Egypt," in Gideon S. Were, ed. Women and Development in Africa. Nairobi: Gideon S. Were Press.
- African Studies Review 18/3. 1975. Special issue on women in Africa. Edited by Edna Bay, Nancy Hafkin and the African Studies Association Committee on Women.
- Agarwal, Bina. 1985. "Women and Technological Change in Agriculture: The Asian and African Experience," in Eftikhar Ahmed, ed. Technology and Rural Women: Conceptual and Empirical Issues. London: George Allen and Unwin.
- Ahmed, Eftikhar, ed. 1985. Technology and Rural Women: Conceptual and Empirical Issues. London: George Allen and Unwin. A study prepared for the International Labour Office within the framework of the World Employment Programme.
- Almond, Gabriel and James Coleman, eds. 1960. The Politics of Developing Areas. Princeton, New Jersey: Princeton University Press.
- Althusser, Louis. 1977. For Marx. London: New Left Books (Paris: Maspero, 1968).
- Althusser, Louis. 1971. "Ideology and Ideological State Apparatuses," in Lenin and Philosophy. London: New Left Books. (Paris, La Pensée, 1970).
- Althusser, Louis and E. Balibar. 1970. Reading Capital. London: New Left Books. (Paris, Maspero, 1968).

Amin, Samir. 1972. "Underdevelopment and Dependency in Black Africa -- Origins and Contemporary Forms." Journal of Modern African Studies 10(4): 503-24.

Anderson, Mary. 1985. "Technology Implications for Women," in Catherine Overholt, Mary Anderson, Kathleen Cloud and James Austin, eds. Gender Roles in Development Projects: A Case Book. West Hartford, Connecticut: Kumarian Press.

Ardener, Shirley. 1974. Perceiving Women. Cited in Barbara Callaway. "Ambiguous Consequences of the Socialisation and Seclusion of Hausa Women." The Journal of Modern African Studies 22(3) 1984: 429-50.

Armstrong, Karen. 1978. "Rural Scottish Women: Politics Without Power." Ethnos 43: 51-72.

Association of African Women for Research and Development. 1985. Newsletter - Nairobi 1985.

Association of African Women for Research and Development (AAWORD). 1983. "A Statement on Genital Mutilation," in Miranda Davies, compiler. Third World -- Second Sex. London: Zed Books.

Association of African Women for Research and Development (AAWORD). 1982. "The Experience of the Association of African Women for Research and Development." A Workshop Report prepared for the high level meeting on the Review of Technical Cooperation among Developing countries. Development Dialogue. Uppsala: Dag Hammarskjold Foundation. 1(2): 101-113.

Badri, Balghis. 1986. "Women, Land Ownership and Development in the Sudan." Canadian Woman Studies/les cahiers de la femme 7 (1&2): 89-92.

Baran, Paul. 1968. The Political Economy of Growth. New York: Monthly Review Press.

Barrett, Michèle. 1980. Women's Oppression Today: Problems in Marxist Feminist Analysis, London: Verso.

Baudrillard, Jean. 1975. The Mirror of Production. Translated by Mark Poster. St. Louis: Telos Press.

Bay, Edna, ed. 1982. Women and Work in Africa. Boulder, Colorado: Westview Press.

Beneria, Lourdes and Gita Sen. 1986. "Accumulation, Reproduction, and Women's Role in Economic Development: Boserup Revisited," in Eleanor Leacock, Helen Safa and Contributors. Women's Work: Development and the Division of Labour By Gender. South Hadley, Massachusetts: Bergin & Garvey Publishers.

Bennett, F.J. 1981. Editorial. Social Science and Medicine 16(3): 233-34.

Berg, Robert J. and Jennifer Seymour Whitaker, eds. 1986. Strategies for African Development. A Study for the Committee on African Development Strategies, sponsored by the Council on Foreign Relations and the Overseas Development Council. Berkeley: University of California Press.

Bernstein, Henry. 1977. "Notes on Capital and Peasantry." Review of African Political Economy 10: 60-73.

Boserup, Ester. 1970. Women's Role in Economic Development, London: George Allen and Unwin.

Brett, E.A. 1973. Colonialism and Underdevelopment in East Africa: The Politics of Economic Change 1919-39. London: Heinemann.

Brink, Pamela. 1982. "Traditional Birth Attendants Among the Annang of Nigeria." Social Science and Medicine 16(21): 1883-1892.

Brownmiller, Susan. 1976. Against Our Will: Men, Women and Rape. New York: Bantam.

Bryceson, Deborah Fahy. 1985. Women and Technology in Developing Countries: Technological Change and Women's Capabilities and Bargaining Positions. Santo Domingo: United Nations International Research and Training Institute for the Advancement of Women (INSTRAW).

Bryceson, Deborah. 1980. "The Proletarianization of Women in Tanzania." Review of African Political Economy 17: 4-27.

Bryson, Judy. 1981. "Women and Agriculture in Sub-Saharan Africa: Implications for Development (An Exploratory Study)." The Journal of Development Studies 17(3): 29-46.

Buvinič, Mayra, Lycette and McGreevey. 1983. Women's Issues in Third World Poverty. Baltimore: Johns Hopkins.

Cain, Melinda. 1981. "Overview: Women and Technology -- Resources for Our Future," in Roslyn Dauber and Melinda L. Cain, eds. Women and Technological Change in Developing Countries. Boulder, Colorado: Westview Press.

Callaway, Barbara. 1984. "Ambiguous Consequences of the Socialisation and Seclusion of Hausa Women." The Journal of Modern African Studies 22(3) 429-50.

Canadian Woman Studies/les cahiers de la femme. 1986. 7(1&2), "Post Nairobi" (special double issue on Forum '85).

Caplan, Patricia. 1981. "Development Policies in Tanzania -- Some Implications for Women," in Nici Nelson, ed. African Women in the Development Process. London: Frank Cass.

Caplan, Patricia and Janet Bujra, eds. 1979. Women United, Women Divided: Comparative Studies of Ten Contemporary Cultures. Bloomington: Indiana University Press.

Carr, Marilyn. 1981. "Technologies Appropriate for Women: Theory, Practice and Policy," in Roslyn Dauber and Melinda L. Cain, eds. Women and Technological Change in Developing Countries. American Association for the Advancement of Science Selected Symposium no. 53. Boulder, Colorado: Westview Press.

Chambers, Robert. 1983. Rural Development: Putting the Last First. London and Lagos: Longman.

Charlton, Sue Ellen. 1984. Women in Third World Development. Boulder, Colorado: Westview Press.

Chege, Rebecca Njeri. 1986. "Communal Food Production: The Mukuru-Kaiyaba Women's Group in Nairobi." Canadian Woman Studies/les cahiers de la femme 7(1&2): 76-77.

Cherian, A. 1981. "Attitudes and Practices of Infant Feeding in Zaria, Nigeria." Ecology of Food and Nutrition 11(2): 75-80.

Chintu-Tembo, Stella. 1985. "Women and Health," in Zambia Association for Research and Development (ZARD), ed. Women's Rights in Zambia: Proceedings of the Second National Women's Rights Conference. Lusaka: ZARD.

Ciancanelli, Penelope. 1980. "Exchange, Reproduction and Sex Subordination Among the Kikuyu of East Africa." Review of Radical Political Economy 12(2): 25-36.

Clark, Carolyn M. 1980. "Land and Food, Women and Power, in Nineteenth Century Kikuyu." Africa 50(4): 357-69.

Cohen, Abner. 1969. "The Migratory Process: Prostitutes and Housewives," in Custom & Politics in Urban Africa. Berkeley: University of California Press.

Collier, Jane and Michelle Rosaldo. 1981. "Politics and Gender in Simple Societies," in Sherry Ortner and Harriet Whitehead, eds., Sexual Meanings: The Cultural Construction of Gender and Sexuality. Cambridge: Cambridge University Press.

Conti, Anna. 1979. "Capitalist Organization of Production Through Non-Capitalist Relations: Women's Role in a Pilot Resettlement in Upper Volta." Review of African Political Economy 15/16: 75-92.

Coquery-Vidrovitch, Catherine. 1977. "Research on an African Mode of Production," in P. Gutkind and P. Waterman, eds., African Social Studies: a Radical Reader, New York, Monthly Review Press (originally published in Critique of Anthropology 4-5, 1975).

- Crummey, Donald and C.C. Stewart, eds. 1981. Modes of Production in Africa. Beverly Hills: Sage Publications.
- Cutrufelli, Maria Rosa. 1983. Women of Africa: Roots of Oppression. London: Zed Press.
- D'Onofrio-Flores, Pamela and Sheila Pfafflin, eds. 1982. Scientific-Technological Change and the Role of Women in Development. United Nations Institute for Training and Research (UNITAR). Boulder, Colorado: Westview Press.
- Dauber, Roslyn and Melinda L. Cain, eds. 1981. Women and Technological Change in Developing Countries. American Association for the Advancement of Science Selected Symposium no. 53. Boulder, Colorado: Westview Press.
- Davidson, Basil. 1969. The African Genius: An Introduction to African Cultural and Social History. Boston: Little, Brown and Company (Atlantic Monthly Press Books).
- Davies, Miranda, compiler. 1983. Third World -- Second Sex: Women's Struggles and National Liberation, Third World Women Speak Out. London: Zed Books.
- DAWN Group (Development Alternatives with Women for a New Era). 1986. "Development Crisis and Alternative Visions: Third World Women's Perspectives." Canadian Woman Studies/les cahiers de la femme 7(1&2): 53-59.
- Development Dialogue. 1982: 1(2), "Another Development With Women."
- Dey, Jennie. 1981. "Gambian Women: Unequal Partners in Rice Development Projects?" in Nici Nelson, ed. African Women in the Development Process. London: Frank Cass.
- Douglas, Mary. 1963. The Lele of Kasai. London: Oxford University Press.
- Doyal, Lesley. 1979. The Political Economy of Health. London: Pluto Press.
- Dreyfus, Hubert and Paul Rabinow. 1983. Michel Foucault: Beyond Structuralism and Hermeneutics (second edition with an Afterword by Michel Foucault). Chicago: University of Chicago Press.
- Eastman, Paul. 1980. An End to Pounding: A New Mechanical Flour Milling System in Use in Africa. Ottawa: IDRC.
- Economic Commission for Africa. 1977. "Origin and Growth of the African Research and Training Centre for Women of the Economic Commission for Africa." Regional Conference on the Implementation of National, Regional and World Plans of Action for the Integration of Women in Development, Nouakchott, Mauritania, 27 September - 2 October 1977. E/CN.14/ACTRW/BD.7
- El Naiem, Abdullahi Ahmed. 1984. "A Modern Approach to Human Rights in Islam: Foundations and Implications for Africa," in Claude Welch, Jr. and

Ronald Meltzer, eds. Human Rights and Development in Africa. Albany: State University of New York Press.

Elling, Ray. 1981. "The Capitalist World-System and International Health." International Journal of Health Services 11(1): 21-51.

Engels, Friedrich. 1970[1884]. The Origin of the Family, Private Property and the State. New York: International Publishers Company.

Etienne, Mona. 1980. "Women and Men, Cloth and Colonization: The Transformation of Production-Distribution Relations Among the Baule (Ivory Coast)," in Mona Etienne, and Eleanor Leacock, eds. Women and Colonization: Anthropological Perspectives. New York: Praeger.

Etienne, Mona and Eleanor Leacock, eds. 1980. Women and Colonization: Anthropological Perspectives. New York: Praeger.

Evans, Peter. 1979. Dependent Development: The Alliance of Multinational, State and Local Capital in Brazil. Princeton, New Jersey: Princeton University Press.

Feldman, Rayah. 1984. "Womens Groups and Women's Subordination: An Analysis of Policies Towards Rural Women in Kenya." Review of African Political Economy 27-28: 67-85.

Feldman, R. 1981. Employment Problems of Rural Women in Kenya. Addis Ababa: ILO-JASPA.

Feuerstein, M.T. 1976. "Rural Health Problems in Developing Countries: The Need for a Comprehensive Community Approach." Community Development Journal 2(1): 38-52.

Feuerstein, Marie Therese. 1976. "Rural Health Problems in Developing Countries: The Need for a Comprehensive Community Approach." Community Development Journal 11 (3): 38-52.

Firestone, Shulamith. 1970. The Dialectic of Sex: the Case for Feminist Revolution. New York: William Morrow.

Flora, Cornelia Butler. 1982. "Incorporating Women into International Development Programs: The Political Phenomenology of a Private Foundation." Women's Politics 2(4): 89-107.

Fortmann, Louise. 1979. "The Plight of the Invisible Farmer: The Effect of National Agricultural Development Policy on Women," in Women and Development. Final Report of the American Association for the Advancement of Science Workshop for the United States Department of State. Washington, D.C. Reprinted in Roslyn Dauber and Melinda L. Cain, eds. 1981. Women and Technological Change in Developing Countries. American Association for the Advancement of Science Selected Symposium no. 53. Boulder, Colorado: Westview Press.

- Foucault, Michel. 1980a. The History of Sexuality. Volume I: An Introduction. Translated by Robert Hurley. New York: Vintage/Random House.
- Foucault, Michel. 1980b. Power/Knowledge: Selected Interviews and Other Writings 1972-1977. Edited by Colin Gordon. New York: Pantheon Books.
- Foucault, Michel. 1979. Discipline and Punish: The Birth of the Prison. Translated by Alan Sheridan. New York: Vintage/Random House.
- Foucault, Michel. 1973. Madness and Civilization: A History of Insanity in the Age of Reason. Translated by R. Howard. New York: Vintage/Random House.
- Frank, André Gunder. 1967. Capitalism and Underdevelopment in Latin America. New York: Monthly Review Press.
- Gascon, Gaetane. 1986. "Les Femmes Et La Production Alimentaire." Canadian Woman Studies/les cahiers de la femme 7(1&2): 28-30).
- Geertz, Clifford. 1983. Local Knowledge: Further Essays in Interpretive Anthropology. New York: Basic Books.
- George, Susan. 1979. Feeding the Few: Corporate Control of Food. Washington, D.C.: Institute for Policy Studies.
- George, Susan. 1977. How the Other Half Dies: The Real Reasons for World Hunger. New York: Penguin.
- Getechah, W. 1981. "The Role of Women in Rural Water Development in Kenya," in IDRC. Rural Water Supply in Developing Countries. Ottawa: IDRC.
- Ghai, Y.P. and J.P.W.B. McAuslan. 1970. Public Law and Political Change in Kenya. Nairobi: Oxford University Press.
- Glazier, Jack. 1985. Land and the Uses of Tradition Among the Mbeere of Kenya. Lanham, MD: University Press of America.
- Gordon, Jill. 1984. "Important Issues for Feminist Nutrition Research - A Case Study From the Savanna of West Africa." Institute of Development Studies, Sussex, Bulletin 15(1). "Research on Rural Women: Feminist Methodological Questions." 38-42.
- Gumede, M.V. 1978. "Traditional Zulu practitioners and obstetric medicine." South African Medical Journal 53(21): 823-25.
- Guyer, Janet. 1986. "Women's Role in Development," in Robert Berg and Jennifer Seymour Whitaker, eds. Strategies for African Development. Berkeley: University of California Press.
- Hafkin, Nancy and Edna Bay, eds. 1976. Women in Africa: Studies in Social and Economic Change. Stanford: Stanford University Press.

Hanger, J. and J. Morris. 1973. "Women and the Household Economy," in R. Chambers and J. Morris, eds. Mwea: An Irrigated Rice Settlement in Kenya. Munich: Welforum Verlag.

Hanna, William and Judith Hanna. 1971. Urban Dynamics in Black Africa. Chicago: Aldine-Atherton.

Hartmann, Heidi. 1981. "The Unhappy Marriage of Marxism and Feminism: Towards a More Progressive Union," in Lydia Sargent, ed. Women and Revolution. Boston: South End Press.

Hay, Margaret Jean and Sharon Stichter, eds. 1984. African Women South of the Sahara. London: Longman.

Henn, Jean Koopman. 1983. "Feeding the Cities and Feeding the Peasants: What Role for Africa's Women Farmers?" World Development 11(12): 1043-55.

Hobley, C.W. 1983[1922]. Bantu Beliefs and Magic. London: Cass.

Hoskyns, Marilyn and Fred Weber. 1985. "Why Appropriate Technology Projects For Women Fail?" Ecoforum (a Journal of the Environment Liaison Centre, Nairobi) 10(2): 6-8.

Howard, Rhoda. 1984. "Women's Rights in English-speaking Sub-Saharan Africa," in Claude Welch, Jr. and Ronald Meltzer, eds. Human Rights and Development in Africa. Albany: State University of New York Press.

Hyden, Goran. 1986. "African Social Structure and Economic Development," in Robert Berg and Jennifer Seymour Whitaker, eds. Strategies for African Development. Berkeley: University of California Press.

Igun, U.A. 1982. "Child-Feeding Habits In a Situation of Social Change: The Case of Maiduguri, Nigeria." Social Science and Medicine 16(7): 769-81.

INSTRAW and UNICEF. 1985. Women and the International Drinking Water Supply and Sanitation Decade. Submitted to the World Conference to Review and Appraise the Achievements of the United Nations Decade for Women. Santo Domingo: INSTRAW.

International Labour Office. 1985. Resources, Power and Women. Proceedings of the African and Asian Inter-regional Workshop on Strategies for Improving the Employment Conditions of Rural Women, Arusha, United Republic of Tanzania, 20-25 August 1984. Geneva.

International Labour Office. 1984. Rural Development and Women in Africa. Proceedings of the ILO Tripartite African Regional Seminar on Rural Development and Women, and Case Studies. Geneva: ILO.

International Labour Office. 1980. Women in Rural Development: Critical Issues. Geneva: ILO.

International Development Research Centre. 1984. Coming Full Circle: Farmers' Participation in the Development of Technology. Edited by Peter Matlon, Ronald Cantrell, David King, and Michel Benoit-Cattin. Ottawa: IDRC.

International Development Research Centre. 1981a. Resource Allocation to Agricultural Research. Proceedings of a workshop held in Singapore, 8-10 June 1981. Edited by Douglas Daniels and Barry Nestel. Ottawa: IDRC.

International Development Research Centre. 1981b. Rural Water Supply in Developing Countries. Proceedings of a workshop on training held in Zomba, Malawi, 5-12 August 1980. Ottawa: IDRC.

Isely, Raymond. 1984. "Rural Development Strategies and Their Health and Nutrition-Mediated Effects on Fertility: A Review of the Literature." Social Science and Medicine 18(7): 581-87 (commissioned by the Development Administration and Rural Development Office of USAID).

ISIS. 1983. Women in Development: A Resource Guide for Organization and Action. Geneva: ISIS Womens International Information and Communication Service.

Jackson, Cecile (a.k.a. Sam) 1985. The Kano River Irrigation Project. Womens Roles & Gender Differences In Development Case Study Series. West Hartford, Connecticut: Kumarian Press.

Jackson, Cecile. 1978. "Hausa Women on Strike." Review of African Political Economy 13 (May-August): 21-36.

Jaggar, Alison and Paula Rothenberg (formerly Paula Struhl). 1984. Feminist Frameworks: Alternative Theoretical Accounts of the Relations Between Women and Men. 2nd Edition. New York: McGraw-Hill.

Jaggar, Alison. 1983. Feminist Politics and Human Nature. Brighton: The Harvester Press (New Jersey, Rowman and Allanheld, 1983).

Jaggar, Alison. 1977. "Political Philosophies of Women's Liberation," in M. Vetterling-Braggin et al, eds. Feminism and Philosophy. Totawa, New Jersey: Littlefield, Adams & Co.

Janelid, Ingrid. 1975. The Role of Women in Nigerian Agriculture. Rome: FAO. Cited in Sue Ellen Charlton. 1984. Women in Third World Development. Boulder, Colorado: Westview Press. n. 2, p. 101.

Katz, Stephen. 1987. "The Problems of Europocentrism and Evolutionism in Marx's Writing on Colonialism." Unpublished paper.

Katz, Stephen. 1985. "The Succession to Power and the Power of Succession: Nyayoism in Kenya." Journal of African Studies 12(3): 155-161.

Katz, Stephen. 1980. Marxism, Africa and Social Class: A Critique of Relevant Theories. Occasional Monograph Series No. 14. Montreal: Centre for Developing-Area Studies.

Kazembe, Joyce and Marjon Mol. 1986. "The Changing Legal Status of Women in Zimbabwe Since Independence." Canadian Woman Studies/les cahiers de la femme 7(1&2): 53-59.

Kenya. 1983. Development Plan 1984-1988. Nairobi: Government Printer.

Kenyatta, Jomo. 1938. Facing Mount Kenya. New York: Vintage Books.

Kershaw, Greet. 1973. "The Kikuyu of Central Kenya," in Angela Molnos, ed. Cultural Source Materials for Population Planning in East Africa. Vol. 3, Beliefs and Practices. Nairobi: East African Publishing House.

Kertzer, David and Oker B.B. Madison. 1981. "Women's Age-Set Systems in Africa: The Latuka of Southern Sudan," in Christine Fry, ed. Dimensions: Aging, Culture and Health. New York: Praeger.

Kettel, Bonnie. 1986. "The Commoditization of Women in Tugen (Kenya) Social Organization," in Claire Robertson and Iris Berger, eds. Women and Class in Africa. New York: Holmes & Meier.

Keyi, Vuyiswa. 1986. "Women's Collective Action as a Manifestation of Female Solidarity From Pre-Colonial Zimbabwe to Present." Unpublished manuscript.

King, Kenneth. 1986. "Manpower, Technology, and Employment in Africa: Internal and External Policy Agendas," in Robert Berg and Jennifer Seymour Whitaker, eds. Strategies for African Development. Berkeley: University of California Press.

King, Maurice. 1966. Medical Care in Developing Countries. A Primer on the Medicine of Poverty and a Symposium from Makerere [University, Uganda]. Nairobi: Oxford University Press (reprinted seven times to 1975).

Kneerim, Jill. 1980. Village Women Organize: The Mraru Bus Service. SEEDS Pamphlet Series (Jointly sponsored by the Carnegie Corporation, the Ford Foundation and the Population Council). New York: Seeds.

Koeune, Esther. 1983 1952]. The African Housewife and Her Home. Nairobi: Kenya Literature Bureau.

Laclau, Ernesto. 1977. Politics and Ideology in Marxist Theory. London: New Left Books.

Ladipo, Patricia. 1981. "Developing Women's Cooperatives: An Experiment in Rural Nigeria," in Nici Nelson, ed. African Women in the Development Process. London: Frank Cass.

Lambert, H.E. 1956. Kikuyu Social and Political Institutions. London: Oxford University Press.

Lappé, Frances Moore and Adele Beccar-Varela. 1980. Mozambique and Tanzania: Asking the Big Questions. San Francisco: Institute for Food and Development Policy.

Lappé, Frances Moore and Joseph Collins. 1978. Food First: Beyond the Myth of Scarcity. New York: Ballantine Books.

Lawrence, Peter, ed. 1986. World Recession and the Food Crisis in Africa. London: Review of African Political Economy, James Currey.

Leacock, Eleanor. 1981. Myths of Male Dominance, New York: Monthly Review Press.

Leacock, Eleanor, Helen Safa and Contributors. 1986. Women's Work: Development and the Division of Labour By Gender. South Hadley, Massachusetts: Bergin & Garvey Publishers.

Leakey, L.S.B. 1977 [1933]. The Southern Kikuyu Peoples Before 1903. Vols. 1-3. London: Academic Press.

Leonard, David. 1986. "Putting the Farmer in Control: Building Agricultural Institutions," in Robert Berg and Jennifer Seymour Whitaker, eds. Strategies for African Development. Berkeley: University of California Press.

Levi-Strauss, Claude. 1969. The Elementary Structures of Kinship. Boston: Beacon Press.

Lewis, Barbara. 1984. "The Impact of Development Policies on Women," in Margaret Jean Hay and Sharon Stichter, eds. African Women South of the Sahara. London: Longman.

Leys, Colin. 1975. Underdevelopment in Kenya. London: Heinemann.

Llewelyn-Davies, Melissa. 1979. "Two Contexts of Solidarity Among Pastoral Maasai Women," in Patricia Caplan and Janet Bujra, eds. Women United, Women Divided: Comparative Studies of Ten Contemporary Cultures. Bloomington: Indiana University Press.

Mackenzie, Fiona. 1986. "Land and Labour: Women and Men in Agricultural Change, Murang'a District, Kenya, 1880-1984." Doctoral Dissertation, University of Ottawa.

Mahler, H. 1974. "The Health of the Family." Keynote Address to the International Health Conference of the National Council for International Health. Washington, D.C., October 16.

Mainardi, Pat. 1970. "The Politics of Housework," pp. 447-453 in Robin Morgan, ed. Sisterhood is Powerful. New York: Vintage Books.

Mamdani, Mahmud. 1976. Politics and Class Formation in Uganda. New York: Monthly Review Press.

March, Kathryn and Rachelle Taqu. 1986. Women's Informal Associations in Developing Countries. Boulder, Colorado: Westview Press.

Marris, Peter and Anthony Somerset. 1971. African Businessmen: A Study of Entrepreneurship and Development in Kenya. Nairobi: East African Publishing House (with Routledge and Kegan Paul).

Mazangira Institute. 1985. A Guide to Women's Organizations and Agencies Serving Women in Kenya. Nairobi: Mazangira Institute.

Mbilinyi, Marjorie. 1986. "The Participation of Women in Tanganyikan Anti-Colonial Struggles." Paper delivered at the Biennial Conference of The Review of African Political Economy, University of Liverpool, September 1986.

Mbilinyi, Marjorie. 1985a. "'City' and 'Countryside' in Colonial Tanganyika." Economic and Political Weekly XX(43): 88-96.

Mbilinyi, Marjorie. 1985b. "Women's Studies and the Crisis in Africa." Social Scientist (Dar es Salaam) 13(10-11): 72-85.

Mbilinyi, Marjorie. 1984. "Research Priorities in Women's Studies in Eastern Africa." Women's Studies International Forum 7(4): 289-300.

Meillassoux, Claude. 1972. "From Reproduction to Production: A Marxist Approach to Economic Anthropology." Economy and Society 1(1): 93-105.

Mickelwait, Donald, Mary Ann Riegelman and Charles Sweet. 1976. Women in Rural Development: A Survey of the Roles of Women in Ghana, Lesotho, Kenya, Nigeria, Bolivia, Paraguay and Peru. Boulder, Colorado: Westview Press. Published in cooperation with Development Alternatives, Inc., prepared for the Office of Development Administration, USAID.

Middleton, John and Greet Kershaw. 1965. The Central Tribes of the North-Eastern Bantu. London: International African Institute.

Mill, John Stuart, and Harriet Taylor. 1983. The Subjection of Women [1851]. Enfranchisement of Women [1869]. London: Virago Press.

Millett, Kate. 1970. Sexual Politics. New York: Doubleday.

Minson, Jeffrey. 1985. Genealogies of Morals: Nietzsche, Foucault, Donzelot and the Eccentricity of Ethics. New York: St. Martin's Press.

Mohammadi, Pari. 1984. "Women and National Planning: False Expectations," Development: Seeds of Change 4: 80-81.

Molnos, Angela. 1972-1973. Cultural Source Materials for Population Planning in East Africa. Vols. I-IV. Institute of African Studies, University of Nairobi (with Ford Foundation). Nairobi: East African Publishing House.

Morgan, Robin, ed. 1984. Sisterhood is Global. New York: Anchor Books.

- Morgan, Robin, ed.. 1970. Sisterhood is Powerful. New York: Vintage Books.
- Mosley, Paul. 1986. "The Politics of Economic Liberalization: USAID and the World Bank in Kenya, 1980-1984." African Affairs 85(338): 107-19.
- Mullings, Leith. 1976. "Women and Economic Change in Africa," in Nancy Hafkin and Edna Bay, eds. Women in Africa: Studies in Social and Economic Change. Stanford: Stanford University Press.
- Muntemba, Maud Shiwaayi. 1982. "Women and Agricultural Change in the Railway Region of Zambia: Dispossession and Counterstrategies, 1930-1970," in Edna Bay, ed. 1982. Women and Work in Africa. Boulder, Colorado: Westview Press.
- Muriuki, Godfrey. 1974. A History of the Kikuyu 1500-1900. Nairobi: Oxford University Press.
- Navarro, Vicente, ed. 1981. Imperialism, Health and Medicine. Farmingham, New York: Baywood Publishing Co. (London: Pluto Press, 1982).
- Nelson, Nici, ed. 1981. African Women in the Development Process. London: Frank Cass.
- Newman, Katherine. 1981. "Women and Law: Land Tenure in Africa," in Naomi Black and Ann Baker Cottrell, eds. Women and World Change: Equity Issues in Development. Beverly Hills: Sage Publications.
- O'Barr, Jean, ed. 1982. Perspectives on Power: Women in Africa, Asia, and Latin America. Durham, North Carolina: Duke University Center for International Studies.
- O'Kelly, Elizabeth. 1973. Aid and Self Help. London. Cited in Audrey Wipper. "Women's Voluntary Associations," in Margaret Jean Hay and Sharon Stichter, eds. African Women South of the Sahara. London: Longman.
- O'Neil, Maureen. 1986. "Forward-Looking Strategies: The UN World Conference on Women." Canadian Woman Studies/les cahiers de la femme 7 (1&2): 19-21.
- Obbo, Christine. 1986. "Stratification and the Lives of Women in Uganda," in Claire Robertson and Iris Berger, eds. 1986. Women and Class in Africa. New York: Holmes & Meier.
- Obbo, Christine. 1980. African Women: Their Struggle for Economic Independence. London: Zed Press.
- Oboler, Regina Smith. 1985. Women, Power and Economic Change: The Nandi of Kenya. Stanford: Stanford University Press.
- Odumosu, M.O. 1982. "Mass Media and Immunization Awareness of Pregnant Women in a Nigerian Community." Canadian Journal of Public Health 73(2): 105-108.

Ogunmekan, D.A. 1977. "Protecting the Nigerian Child Against the Common Communicable Diseases." Tropical and Geographical Medicine 29(4): 389-92.

Ojofeitimi, E.O. and C.M. Tanimowo. 1980. "Nutritional Beliefs Among Pregnant Nigerian Women." International Journal of Gynaecology and Obstetrics 18(1): 66-69.

Okafor, Francis C. 1984. "Accessibility to General Hospitals in Rural Bendel State, Nigeria." Social Science and Medicine 18(8): 661-66.

Okeyo, Achola Pala. 1980. "Daughters of the Lakes and Rivers: Colonization and the land Rights of Luo Women," in M. Etienne and E. Leacock, eds. Women and Colonization: Anthropological Perspectives. New York: Praeger.

Oleru, U.G. and O.O.J Kolawole. 1983. "Factors Influencing Primary Health Care: A Look At a Pediatric Emergency Unit." Journal of Tropical Pediatrics 29 (December): 319-25.

Onokerhoraye, Andrew. 1984. Social Services in Nigeria: An Introduction. London: Kegan Paul.

Organization of African Unity. 1980. Lagos Plan of Action for the Economic Development of Africa, 1980-2000. Addis Ababa: OAU.

Orubuloye, I.O., and O.Y. Oyenye. 1982. "Primary Health Care in Developing Countries: The Case of Nigeria, Sri Lanka and Tanzania." Social Science and Medicine 16(6): 675-86.

Overholt, Catherine, Mary Anderson, Kathleen Cloud and James Austin, eds. 1985. Gender Roles in Development Projects: A Case Book. West Hartford, Connecticut: Kumarian Press.

Palmer, Ingrid. 1985. The Impact of Agrarian Reform on Women. Women's Roles & Gender Differences in Development Case Study Series. West Hartford, Connecticut: Kumarian Press.

Palmer, Ingrid. 1981. Women, Food Chains and Agrarian Reform. Rome: FAO. An essay to mark the first World Food Day, 16 October.

Palmer, Ingrid. 1978. "Women and Green Revolutions." Paper presented to the Conference on the Continuing Subordination of Women and the Development Process. Sussex: Institute of Development Studies. Mimeo.

Parkin, David. 1972. Palms, Wine, and Witnesses: Public Spirit and Private Gain in an African Farming Community. San Francisco: Chandler Publishing Company.

Paulme, Denise, ed. 1971. Women of Tropical Africa. Translated by H.M. Wright. Berkeley: University of California Press (Paris: Mouton, 1960).

Payer, Cheryl. 1982. The World Bank: A Critical Analysis. New York: Monthly Review Press.

Poulantzas, Nicos. 1973. Political Power and Social Classes. London: New Left Books (Paris, Maspero, 1968).

Rabinow, Paul and William Sullivan, eds. 1979. Interpretive Social Science: A Reader. Berkeley: University of California Press.

Rachlan. 1986. "The Citanduy River Basin Management: From Grass-Roots Experiments to Full Scale Implementation." Bandung, September. Unpublished manuscript.

Rehan, Nagma. 1984. "Knowledge, Attitude and Practice of Family Planning in Hausa Women." Social Science and Medicine 18(10): 839-44.

Resources for Feminist Research Documentation/Documentation sur la recherche féministe (RFR/DRF). 1982. Special issue on Women and Agricultural Production. II(1).

Review of African Political Economy. 1986. 36: Special issue on "Africa -- the Health Issue."

Review of African Political Economy. 1984. 27-28: Special double issue on women.

Robertson, Claire, and Iris Berger, eds. 1986. Women and Class in Africa. New York: Holmes & Meier.

Rodney, Walter. 1972. How Europe Underdeveloped Africa. London: Bogle-L'Ouverture Publications.

Rogers, Barbara. 1980. The Domestication of Women: Discrimination in Developing Societies. London: Tavistock Publications.

Rosaldo, Michelle Zimbalist and Louise Lamphere, eds. 1974. Woman, Culture and Society. Stanford: Stanford University Press.

Rostow, W.W. 1971. Stages of Economic Growth. 2d ed. New York: Cambridge University Press.

Routledge, W. Scoresby and Katherine Routledge. 1910. With a Prehistoric People: The Akikuyu of British East Africa. London: Cass.

Rubin, Gayle. 1975. "The Traffic in Women: Notes on the 'Political Economy' of Sex," in Rayna Reiter (Rapp), ed. Toward an Anthropology of Women. New York: Monthly Review Press.

Sacks, Karen. 1982. "An Overview of Women and Power in Africa," in Jean O'Barr, ed. Perspectives on Power: Women in Africa, Asia, and Latin America. Durham, North Carolina: Duke University Center for International Studies.

Sacks, Karen. 1979. Sisters and Wives: the Past and Future of Sexual Inequality, Westport, Connecticut: Greenwood Press.

Sai, Fred. 1986. "Population and Health: Africa's Most Basic Resource and Development Problem," in Robert Berg and Jennifer Seymour Whitaker, eds. Strategies for African Development. Berkeley: University of California Press.

Schlegel, Alice, ed. 1977. Sexual Stratification: A Cross-Cultural View. New York: Columbia University Press.

Schuster, Ilsa. 1981. "Perspectives in Development: The Problem of Nurses and Nursing in Zambia," in Nici Nelson, ed. African Women in the Development Process. London: Frank Cass.

Seidman, Ann. 1981. "Women and the Development of 'Underdevelopment': The African Experience," in Roslyn Dauber and Melinda L. Cain, eds. Women and Technological Change in Developing Countries. American Association for the Advancement of Science Selected Symposium no. 53. Boulder, Colorado: Westview Press.

Sharma, Hari. 1973. "The Green Revolution in India: Prelude to a Red One?" in Kathleen Gough and Hari Sharma, eds. Imperialism and Revolution in South Asia. New York: Monthly Review Press.

Shikwe, R.C. 1981. "The Planning and Organization of Training for Water Development in Kenya," in IDRC. Rural Water Supply in Developing Countries. Ottawa: IDRC.

Slocum, Sally. 1975. "Woman the Gatherer: Male Bias in Anthropology," pp. 36-50 in Rayna Reiter (Rapp), ed. Toward an Anthropology of Women. New York: Monthly Review Press (first appeared under the name Sally Linton in 1971).

Solanas, Valerie. 1968. S.C.U.M. (Society for Cutting Up Men) Manifesto. New York: Olympia Press. (excerpted in Robin Morgan, ed. Sisterhood is Powerful. New York: Vintage Books, 1970).

Stamp, Patricia. 1986. "Kikuyu Women's Self Help Groups: Towards an Understanding of the Relation Between Sex-Gender System and Mode of Production in Africa," in Claire Robertson, Claire and Iris Berger, eds. Women and Class in Africa. New York: Holmes & Meier.

Stamp, Patricia. 1975-1976. "Perceptions of Change and Economic Strategy Among Kikuyu Women of Mitero, Kenya." Rural Africana 29: 19-44.

Stamp, Patricia and Rebecca Njeri Chege. 1984. "Ngwatio: A Story of Cooperative Research on African Women." Canadian Woman Studies/les cahiers de la femme 6(1): 5-9.

Stamp, Patricia. 1987. "Matega: Manipulating Women's Cooperative Traditions For Material and Social Gain in Kenya." Paper delivered at the Third International Interdisciplinary Congress on Women, Dublin, July 1987.

Staudt, Kathleen. 1985a. Women, Foreign Assistance and Advocacy Administration. New York: Praeger.

Staudt, Kathleen. 1985b. Agricultural Policy Implementation: A Case Study From Western Kenya. Women's Roles & Gender Differences in Development Case Study Series. West Hartford, Connecticut: Kumarian Press.

Staudt, Kathleen. 1975-1976. "Women Farmers and Inequities in Agricultural Services." Rural Africana 29 (Winter): 81-94.

Subulola, Goyea. and E.J. Johnson. 1977. "Benin City Mothers: Their Beliefs Concerning Infant Feeding and Child Care." Tropical and Geographical Medicine 29(1): 103-108.

Sudaraska, Niara. 1973. Where Women Work: A Study of Yoruba Women in the Market Place and in the Home. Ann Arbor: Museum of Anthropology, University of Michigan, Anthropological Papers No. 53.

Taylor, John. 1979. From Modernization to Modes of Production: a Critique of the Sociologies of Development and Underdevelopment. London: MacMillan.

Tech & Tools: An Appropriate Technology Event for Women at Forum '85. 1985. Programme of Events: 9-19 July 1985. Nairobi.

Terray, Emmanuel. 1972. Marxism and "Primitive" Societies. New York: Monthly Review Press.

Tinker, Irene. 1981. "New Technologies for Food-Related Activities: An Equity Strategy," pp. 51-88 in Roslyn Dauber and Melinda L. Cain, eds. Women and Technological Change in Developing Countries. Boulder, Colorado: Westview Press, American Association for the Advancement of Science Selected Symposium No. 53.

Tinsley, Sara. 1985. Foreword, in Catherine Overholt, Mary Anderson, Kathleen Cloud and James Austin, eds. Gender Roles in Development Projects: A Case Book. West Hartford, Connecticut: Kumarian Press.

UNICEF. 1980. Appropriate Technology for Basic Services. Report of a UNICEF-sponsored inter-regional workshop, Nairobi, 19-26 March.

United Nations Development Programme. 1982. "Integration of Women in Development." Report of the Administrator. New York.

United States Department of Agriculture (USDA). 1981. Food Problems and Prospects in Sub-Saharan Africa. Washington, D.C.

Urdang, Stephanie. 1985. "The Last Transition? Women and Development," in John Saul, ed. A Difficult Road: The Transition to Socialism in Mozambique. New York: Monthly Review Press.

Urdang, Stephanie. 1979. Fighting Two Colonialisms: Women in Guinea-Bissau. New York: Monthly Review Press.

Van Allen, Judith. 1976. "'Aba Riots' or Igbo 'Women's War?'" Ideology, Stratification, and the Invisibility of Women," in Nancy Hafkin and Edna Bay, eds. Women in Africa: Studies in Social and Economic Change. Stanford: Stanford University Press.

Van Allen, Judith. 1972. "'Sitting on a Man': Colonialism and the Lost Political Institutions of Igbo Women." Canadian Journal of African Studies 6/2: 165-82.

Van Onselen, Charles. 1976. Chibaro: African Mine Labour in Southern Rhodesia 1900-1933. London: Pluto Press.

Ventura-Dias, Vivianne. 1985. "Modernisation, Production Organisation and Rural Women in Kenya," pp. 157-210 in Iftikhar Ahmed, ed. Technology and Rural Women: Conceptual and Empirical Issues. London: George Allen and Unwin.

Wa Karanja, Wambui. 1981. "Women and Work: A Study of Female and Male Attitudes in the Modern Sector of an African Metropolis," in Helen Ware, ed. Women, Education and Modernization of the Family In West Africa. Changing African Family Project Series, Monograph No. 7. Canberra: Department of Demography, Australian National University.

Ware, Helen, ed. 1981. Women, Education and Modernization of the Family In West Africa. Changing African Family Project Series, Monograph No. 7. Canberra: Department of Demography, Australian National University.

Welch, Claude Jr. and Ronald Meltzer, eds. 1984. Human Rights and Development in Africa. Albany: State University of New York Press.

Were, Gideon S., ed. 1985. Women and Development in Africa. Special issue of Journal of Eastern African Research and Development (15). Nairobi: Gideon S. Were Press.

Were, M.K. 1977. "Rural Women's Perceptions and Community-Based Health Care." East African Medical Journal 54(10): 524-30.

Whitehead, Ann. 1985. "Effects of Technological Change on Rural Women: A Review of Analyses and Concepts," in Eftikhar Ahmed, ed. Technology and Rural Women: Conceptual and Empirical Issues. London: Allen and Unwin.

Wicker, A.W. 1969. "Attitudes Versus Actions: The Relationship of Verbal and Overt Behavioural Response to Attitude Objects." Journal of Social Science 25(41).

Wilson, E.O. 1975. Sociobiology. Cambridge, Mass.: Harvard University Press.

Wilson, Francille Rusan. 1982. "Reinventing the Past and Circumscribing the Future: Authenticité and the Negative Image of Women's Work in Zaire," in Edna Bay, ed. Women and Work in Africa. Boulder, Colorado: Westview Press.

Wily, Liz. 1981. Women and Development: A Case Study of Ten Tanzanian Villages. Arusha: Regional Commissioner's Office. Cited in Jean K. Henn.

1983 "Feeding the Cities and Feeding the Peasants: What Role for Africa's Women Farmers?" World Development 11(12): 1043-55.

Wipper, Audrey. 1984. "Women's Voluntary Associations," in Margaret Jean Hay and Sharon Stichter, eds. African Women South of the Sahara. London: Longman.

Wipper, Audrey. 1982. "Riot and Rebellion Among African Women: Three Examples of Women's Political Clout," in Jean O'Barr, ed. Perspectives on Power: Women in Africa, Asia and Latin America. Durham, North Carolina: Duke University, Center for International Studies.

Wipper, Audrey. 1975-1976. "The Maendelao ya Wanawake Organization: the Co-optation of Leadership." African Studies Review 18(3) 99-120.

Wisner, Ben. 1982. "Mwea Irrigation Scheme, Kenya: A Success Story for Whom?" Anthropological Research Council Newsletter. Boston.

Wollstonecraft, Mary. 1795 [1792]. A Vindication of the Rights of Women. Harmondsworth, Middlesex: Penguin.

Women in Nigeria (WIN). 1985a. The WIN Document: Conditions of Women in Nigeria and Policy Recommendations to 2,000 AD. Samaru, Zaria (P.O. Box 253).

Women in Nigeria. 1985b. Women in Nigeria Today. Proceedings of the first seminar on Women in Nigeria, Ahmadu Bello University, Zaria, 1982.

Women's Politics. 1982. Special Theme Issue on "Women in Developing Countries: A Policy Focus." 2(4).

World Bank. 1986. Financing Adjustment with Growth in Sub-Saharan Africa, 1986-90. Washington, D.C.: World Bank.

World Bank. 1983. World Development Report 1983. New York: Oxford University Press.

World Bank. 1981. Accelerated Development in Sub-Saharan Africa: An Agenda for Action (the 'Berg Report'). Washington, D.C.: World Bank.

World Bank. 1979. Recognizing the 'Invisible' Woman in Development: the World Bank's Experience. Washington, D.C.: World Bank.

Zambia Association for Research and Development (ZARD). 1986. "Rural Women and Agricultural Production in Zambia: The Importance of Research on Development Issues." Canadian Woman Studies/les cahiers de la femme 7 (1&2): 78-84.

Zambia Association for Research and Development (ZARD), ed. 1985. Women's Rights in Zambia: Proceedings of the Second National Women's Rights Conference Held at Mindolo Ecumenical Foundation, Kitwe. 22-24 March, 1985. Lusaka: ZARD.

AUTHOR INDEX

- AAWORD 14, 20, 24, 35, 38, 89, 119
Afejuku, D.H. 50
Afonja, Simi 17
African Studies Review 11
African Training and Research Centre for Women (ATRCW) 37, 38, 119
Agarwal, Bina 61, 62, 64
Ahmed, Eftikhar 21, 36, 41
Almond, Gabriel 146
Althusser, Louis 12, 109, 151
Amin, Samir 10, 12, 13
Anderson, Mary 19, 46, 47
Ardener, Shirley 105
Armstrong, Karen 105
Austin, James 19
- Badri, Balghis 97, 98
Baran, paul 9
Barrett, Michele 13
Baudrillard, Jean 110
Bay, Edna 11, 20, 44
Benería, Lourdes 98, 99
Bennett, F.J. 28
Berg, Robert J. 21, 22
Berger, Iris 17, 44, 73
Bernstein, Henry 84
Boserup, Ester 11, 76, 98, 99
Brett, E.A. 61
Brink, Pamela 121
Brownmiller, Susan 16
Bryceson, Deborah 3, 4, 13, 20, 44, 45, 50, 53, 107-108, 109
Bryson, Judy 57
Buvinič, Mayra 13
- Cain, Melinda 21, 41, 42
Callaway, Barbara 26, 66, 105
Canadian Woman Studies/les cahiers de la femme 17, 20, 38, 73, 117, 154
Caplan, Patricia 52, 54
Carr, Marilyn 57
Chambers, Robert 61, 62
Charlton, Sue Ellen 25, 41, 42, 55, 56
Chege, Rebecca Njeri 71-72, 73
Cherian, A. 27, 28
Chintu-Tembo, Stella 118
Ciancanelli, Penelope 78
Clark, Carolyn 17, 78, 79, 127
Cloud, Kathleen 19
Cohen, Abner 11, 27, 66

Collier, Jane 17, 75
 Conti, Anna 13, 68, 81
 Coquery-Vidrovitch, Catherine 13
 Crumney, Donald 13
 Cutrufelli, Maria Rose 14, 84

 D'Onofrio-Flores, Pamela 21
 Dauber, Roslyn 21, 41
 Davidson, Basil 146
 Davies, Miranda 12, 98
 DAWN 38
Development Dialogue 35, 89
 Dey, Jennie 44
 Douglas, Mary 30, 75
 Doyal, Leslie 3, 31-33
 Dreyfus, Hubert 114, 142, 143, 145, 148
 Duley, Margaret, 13
 Eastman, Paul 139
 ECA 37
 Edwards, Mary 13
 El Naiem, Abdullahi Ahmed 118
 Elling, Ray 30, 33
 Engels, Friedrich 16
 Etienne, Mona 81, 85
 Evans, Peter 10
 Feldman, Rayah 36, 49
 Feuerstein, M.T. 28, 121
 Firestone, Shulamith 15
 Flora, Cornelia Butler 35
 Fortmann, Louise 48, 108
 Foucault, Michel 114-116, 142-148
 Frank, André Gunder 9, 12
 Gascon, Gaëtane 39
 Geertz, Clifford 116
 George, Susan 10, 58
 Getechah, W. 25, 149, 150
 Ghai, Y.P. 35, 81
 Glazier, Jack 47, 81, 104, 111
 Gordon, Jill 29
 Gumedé, M.V. 26
 Guyer, Janet 21, 22, 34, 117

 Hafkin, Nancy 11
 Hanger, J. 61
 Hanna, William and Judith 12
 Hartmann, Heidi 16
 Hay, Margaret Jean 44
 Henn, Jean Koopman 24, 43, 49
 Hobley, C.W. 78
 Hoskyns, Marilyn 56
 Howard, Rhoda 117
 Hyden, Goran 22, 46

IDRC 24-25, 139, 152
 Igun, U.A. 28
 ILO 20, 35, 36, 41, 57, 59, 70, 136
 INSTRAW and UNICEF 138-139, 152
 Isely, Raymond 34
 ISIS 38

Jackson, Cecile 64-67, 70, 101, 109
 Jaggat, Alison 14, 16, 105
 Janelid, Ingrid 56
 Johnson, E.J. 120

Katz, Stephen 13, 110, 146
 Kazembe, Joyce 18
 Kenya, Republic of 24
 Kenyatta, Jomo 78, 82
 Kershaw, Greet 78
 Kertzer, David 79
 Kettel, Bonnie 74, 97
 Keyi, Vuyiswa 71
 King, Kenneth 21
 King, Maurice 52
 Kneerim, Jill 137, 138
 Koeune, Esther 150

Laclau, Ernesto 12, 109
 Ladipo, Patricia 100-102, 104
 Lambert, H.E. 151
 Lamphere, Louise 104
 Lappe, Frances Moore 10
 Lawrence, Peter 13
 Leacock, 18, 44, 74-75
 Leakey, L.S.B. 77, 127
 Leonard, David 149, 150
 Levi-Strauss, Claude 17, 74, 75
 Lewis, Barbara 13, 42, 61-64
 Leys, Colin 10, 13
 Llewelyn-Davies, Melissa 98

Mackenzie, Fiona 18, 75, 77, 79, 91, 100, 105, 122, 127
 Madison, Oker 79
 Mahler, H. 30, 31
 Mainardi, Pat 11
 Mamdani, Mahmoud 13
 March, Kathryn 83, 105-107, 118
 Marris, Peter 138
 Mazangira Institute 57
 Mbilinyi, Marjorie 17, 19, 20, 37, 38, 102, 103, 105, 109, 110, 111-113, 116,
 124, 144, 153
 Meillassoux, Claude 13
 Mickelwait, Donald 35, 68

- Middleton, John 78
 Mill, John Stuart 14
 Millett, Kate 11
 Minson, Jeffrey 144
 Mohammadi, Pari 3, 49
 Mol, Marjon 18
 Molnos, Angela 154
 Morgan, Robin 11, 12
 Morris, J. 61
 Mosley, Paul 24
 Mullings, Leith 76
 Muntemba, Maud Shimwaayi 17, 20, 23, 35, 69, 89-93
 Muriuki, Godfrey 61, 77

 Navarro, Vicente 31
 Nelson, Nici 20, 41, 43, 44
 Newman, Katherine 63

 OAU 8, 24
 O'Kelly, Elizabeth 48
 O'Neil, Maureen 15
 Obbo, Christine 17, 76, 81
 Oboler, Regina Smith 80, 81
 Odumosu, M.O. 120
 Ogunmekan, D.A. 26
 Ojofeitimi, E.O. 30
 Okafor, Francis 26
 Okeyo, Achola Pala 13, 17, 18, 20, 80, 85-89, 93, 117
 Oleru, U.G. 26
 Onokerhoraye, Andrew 49, 50
 Orubuloye, I.O. 27
 Overholt, Catherine 19, 34, 35
 Oyenye, O.Y. 27

 Palmer, Ingrid 47, 48
 Parkin, David 18, 81, 104
 Paulme, Denise 11
 Payer, Cheryl 143
 Pfafflin, Sheila 21
 Poulantzas, Nicos 12, 109

 Rabinow, Paul 114, 116, 142, 143, 145, 148
 Rachlan 133
 Rehan, Nagma 26, 27
Review of African Political Economy 12, 18, 31
RFR/DRF 17
 Riegelman, Mary Ann 35, 68
 Robertson, Claire, 17, 20, 44, 73
 Rodney, Walter 10, 12
 Rogers, Barbara 35, 108, 140, 145
 Rosaldo, Michelle Zimbalist 17, 75, 104
 Rostow, W.W. 12

Rothenberg (Struhl) Paula 14
 Routledge, W.S. and K. 78
 Rubin, Gayle 17, 74, 75

Sacks, Karen 13, 18, 76, 77, 80, 81, 100
 Safa, Helen 44
 Sai, Fred 147
 Schlegel, Alice 18
 Schuster, Ilse 44
 Seidman, Ann 48
 Sen, Gita 98, 99
 Sharma, Hari 47
 Shikwe, R.C. 25
 Slocum, Sally 11
 Solanas, Valerie 11
 Somerset, Anthony 138
 Stamp, Patricia 11, 13, 17, 18, 44, 62, 67, 73, 78, 85
 Staudt, Kathleen 13, 20, 34, 50, 51, 60
 Stewart, C.C. 13
 Stichter, Sharon 44
 Subulola, Goyea 120
 Sullivan, William 116
 Sweet, Charles 35, 68

Tanimowo, C.M. 30
 Taqqu, Rachelle 83, 105-107
 Taylor, John 10, 13
 Taylor, Harriet 14
 Terray, Emmanuel 13
 Tinker, Irene 43, 58, 59
 Tinsley, Sara 34, 35

UNICEF 54, 138-139, 152
 Urdang, Stephanie 14, 16

Van Allen, Judith 11, 13, 18, 80, 81, 105, 106, 107
 Van Onselen, Charles 32, 33
 Ventura-Dias, Vivianne 53, 54, 57, 58, 72

Wa Karanja, Wambui 69
 Ware, Helen 48, 56
 Whitaker, Jennifer Seymour 21
 Whitehead, Ann 48
 Wicker, A.W. 27
 Wilson, 111
 Wilson, E.O. 14
 Wilson, Francille 154
 Wily, Liz 49
 WIN 50, 58-59, 100, 119-120
 Wipper, Audrey 48, 68, 71, 105, 140
 Wisner, Ben 61

Wollstonecraft, Mary 14

Women's Politics 35

World Bank 22-24, 58, 108, 143, 149, 150

ZARD 58, 118

SUBJECT INDEX

AAWORD 9, 14, 20, 24, 35, 37-39, 89, 119

African Studies 4, 10-12, 14, 16-19, 103, 123, 154

age grades 76-77, 79, 97, 128

agriculture and farming 2-3, 5, 8, 22-24, 34, 42-44, 46-48, 50, 51, 53, 58, 60, 62, 64-67, 71, 74, 80, 83, 86-92, 95, 97, 98, 101, 108, 112, 121, 122, 127-128, 130, 133, 143, 147, 149, 150-153

aid expert/aid recipient relationship 126, 142, 144-147, 150-154

aid projects 147, 151, 153

AIDS 33, 132

appropriate technology 28, 45, 47, 53-57, 98, 121, 123

ATRCW 8, 37, 38, 119

birth and childbearing (see also midwives) 32, 79, 99-100, 103, 121, 147

Botswana 139

boundary problem 4, 25-27, 33, 35, 96, 124, 130, 152

bridewealth 17, 18, 69, 74-79, 81, 86, 118, 126-127, 129

Cameroon 43, 48, 71, 140

CCIC 39

CIDA 9, 20, 119

community 2, 4, 22, 26-28, 34, 38, 39, 41, 42, 45-47, 53-55, 60, 61, 63, 64, 68, 69, 71, 72-73, 83-86, 88, 93, 96, 99-107, 113, 121, 122, 124, 126-133, 138-142, 149, 151, 152

cooperative cultivation 71, 79, 83

Copenhagen mid-Decade for Women conference 15

Dairying 97-98

DANIDA 9, 36

DAWN 9, 39

development theory, 'developmentalism', 'modernization' 12-13, 24, 30, 32, 35, 66, 95, 101, 107, 126

discourse 2, 27, 84, 85, 103, 104, 106, 110-112, 113-116, 143, 153

ECA 8, 37, 138

economism 109-110

ethnocentrism (see also racism) 15, 27, 110, 113, 117-118, 124-125, 127, 146

family 2, 3, 10, 12, 16, 19, 23, 26-28, 38, 41-44, 46, 51, 52, 54, 56, 58, 59-63, 65, 67, 69-71, 73-75, 78, 80, 82-88, 92, 96, 100-102, 107-109, 111-113, 118, 121, 129-131, 143, 151, 154

'family', false concept of 51-52, 107-109

family planning 23, 26, 27, 38, 59, 73-75, 78, 80, 82-88, 92, 96, 100-102, 107-109, 111-113, 118, 121, 143, 154

family planning, research model 154

FAO 8, 138

feminist political economy 4, 11, 17, 18, 26, 36, 38, 39, 41, 44, 46, 68, 73, 75, 79, 85, 89, 95-97, 99, 101, 104, 109, 115, 119, 124, 125, 146

feminist theories 14-19

food 4, 8, 13, 23, 29, 30, 32, 34, 42, 43, 45, 47, 49, 53, 56, 58, 62, 65, 66, 67, 69, 71, 79, 80, 83, 86, 89-93, 98, 118, 140

food crisis in Zambia 118

Ford Foundation 35, 154

flour milling 136, 139

Forum '85 (Nairobi NGO Conference) 20, 38, 39, 150

gender relations 2, 4, 5, 10, 11, 13-21, 24, 27, 32, 33, 37, 41, 44, 46, 47, 60-62, 64, 65, 67, 68, 73, 74, 78-81, 84-86, 89, 95, 104, 108-110, 113, 116, 123, 128, 129, 131, 146, 154

Hausa 26, 27, 64-67, 78, 83, 101, 105, 118

Health 2-4, 8, 22, 24-34, 38, 42, 46, 52-54, 59, 63, 69, 71, 95-97, 99, 100, 109, 118, 120-122, 128-130, 132, 139, 147, 148, 151, 153

hoe cultivation 17, 22, 23, 74, 76, 83, 122

household 22, 51-52, 54, 56, 58, 60, 62, 63, 65, 67, 68, 76, 78, 80, 83, 86, 87, 90, 92, 99, 101, 103, 107, 108, 128, 130, 132, 140

Ibo 76, 107, 126

IDRC 6, 9, 24, 25, 33, 139, 152

IDWSSD 138

ILO 8, 20, 35, 36, 41, 57, 59, 70, 89, 136

IMF 8, 9, 22, 24

'income generation' approach 45, 57-59, 104

inheritance 81, 88, 90, 92, 108, 128, 129

INSTRAW 8, 138, 152

irrigation schemes 61-66

ISIS 9, 38-39

Islam, Muslim 5, 26, 64, 66-67, 102, 105, 118

KAP (Knowledge, Attitude, Practice) 26, 27

Kenya 4, 5, 9, 18, 24, 25, 28, 36, 37, 41, 47, 50, 51, 53, 54, 57, 58, 60, 61-64, 67, 68-69, 71, 72, 81, 85-88, 118, 119, 126, 137-138, 149, 150, 154

Kikuyu 61, 62, 67, 71, 73-82, 86, 87, 91, 101, 103, 122, 123, 127, 151

kinship 17, 74, 77, 78, 80, 82, 128, 129, 145

KRP (Kano River Project) 64-67, 78, 83, 101, 109, 118

Lagos Plan of Action 24

land tenure, land reform 63, 64, 82-83, 85, 87, 126, 128, 129, 149

liberal feminism (see also feminist theories) 14, 16

lineage (see also patrilineal, patrilineage, matrilineal) 62, 76, 77, 79-82, 6-89, 101, 102, 117, 128

Luo 63, 81, 82, 85-88, 90

local 'knowledges' (see also 'subjugated knowledges') 96, 112-116, 124, 125, 144, 151, 152-154

Malawi 25, 108-109

matega 81, 83, 103, 104, 110

'matriarchy' 108, 145

media 10, 28, 96, 113, 119-121, 132

men, conscientization of 123-124

midwives (see also birth) 100, 102, 118, 121, 153

mode of production 13, 17, 73, 77, 78, 80, 86, 90, 110

'modernization' (see development theory)

Mozambique 16

Muslim, Islam 5, 26, 64, 66-67, 102, 105, 118

Nairobi 15, 20, 33, 35, 38, 39, 53, 71, 81, 86, 118, 119, 150, 154

NGOs (see also Forum '85) 36, 38

Nigeria 1, 5, 9, 26-29, 37, 41, 49, 50, 58, 60, 64-68, 76, 100-102, 119-120, 121, 124, 126, 140

nutrition 2-4, 10, 20, 24-29, 31-34, 46, 51, 63, 65, 71, 79, 95-97, 120, 128, 130, 151

OAU 8, 24

oil press, hydraulic 55-56

- pastoralism 5, 86, 87, 97-98, 127
- patriarchy 13, 15, 17, 74
- patrilineal, patrilineage (see also lineage) 74, 76, 77-79, 81, 98, 108, 117-118, 126-127, 128
- political economy approach (see also feminist political economy) 2-3, 11, 12-14, 17-18, 26, 30-33, 37, 41, 46, 60, 73, 95, 109, 110
- polygyny 17, 52, 56, 68, 69, 74, 76, 78, 82, 107, 129
- population 9, 20, 22, 27, 30, 31, 36, 64, 65, 87, 92, 99, 133, 137, 142, 143, 147, 148, 149, 154
- power/knowledge 114, 128, 130, 144-146, 151
- precapitalist society (see precolonial society)
- precolonial society 12, 13, 17, 18, 73, 74-80, 81, 85-87, 90, 105, 110, 117, 126-127, 128
- 'private' sphere, realm (see also public/private dichotomy) 14, 16, 19, 21, 23, 42, 96, 98, 104, 105, 107, 109, 112, 138, 151
- public/private dichotomy 19, 21, 96, 104-107, 112
- racism (see also ethnocentrism) 11, 37, 123
- radical feminism (see also feminist theories) 10, 14-17, 41
- RCCDC 9
- religion (see also Islam, Muslim) 5, 22, 38, 47, 50, 66, 102, 118, 130
- research/action loci 3-4, 8, 33, 35, 96, 115, 120, 130, 136, 141, 153
- self-help groups (see also women's associations) 72, 79-80, 80-85, 103, 137, 149
- Senegal 20, 35, 36, 57, 89, 119, 140
- sex-gender systems (see also kinship, lineage, patrilineal, matrilineal) 16, 17, 21, 38, 39, 41, 44, 46, 52, 66, 68, 73-85, 86-87, 96, 97, 100, 102, 107, 109, 110, 111, 124, 126-130, 132
- sexism, sexist bias 11, 15, 16, 45, 49, 51, 74, 96, 123, 133
- sexual division of labour 14, 21, 36, 57, 90, 92, 93, 104, 128, 129, 132

SIDA 9, 35

Sierra Leone 70-71

socialist feminism 14, 16

stoves 53, 56-57, 122

subjugated knowledges (see also local knowledges) 113-116, 146

Sudan 9, 87, 97-98

Taita 137-138

Tanzania, Tanganyika 9, 27, 31, 33, 36, 37, 43, 48, 49, 52, 54, 59, 70, 111-113, 124, 136, 153, 154

technological 'fix' 45, 46

technology, indigenous or traditional 96, 122-123

tradition 5, 11, 12, 17, 32, 47, 60, 81, 85, 86, 95, 103, 104, 110, 111, 113, 118, 119, 149, 151

'tradition', false concept of 80-81, 85, 95, 110, 111, 113, 118-119, 149

traditional Marxism 14, 16

traditional/modern dichotomy (see also development theories, 'tradition') 30, 54, 80, 112

underdevelopment, underdevelopment theory 3, 9, 12, 36, 80, 95, 115

UNESCO 8, 138

UNICEF 8, 35, 53, 54, 138, 139, 152

UNITAR 8

USAID 9, 19, 24, 25, 34, 35, 68

use rights (usufructory rights) 63, 77, 81, 87-88, 93, 98, 117-118, 128, 129

WAG 9, 37

Water supply, development 25, 26, 28, 49, 53, 55, 63, 65, 69, 71, 83, 87, 108, 132, 136, 138-139, 149, 152

'welfare', false concept of, see women as 'welfare subjects'

WHO 8, 30, 138

WID (women in development), the WID approach 4, 15, 16, 20, 21, 26, 33, 34, 37, 41, 44, 57, 59, 64, 68, 70, 88, 89, 95-97, 102, 104, 107, 109, 110, 113, 117, 119, 126, 152

WIN 9, 37, 50, 58-59, 100, 119-120

women as 'welfare subjects' 45, 50, 59-60, 72, 104, 108, 109, 148

women's associations and organizations (see also self-help groups, age grades)
2, 20, 34, 36, 38, 42, 68, 69-72, 73, 79, 85, 97, 100, 103, 105, 107, 119, 121, 128, 130, 133-135, 137, 149

women's power and autonomy 18, 63, 80, 81

women's rights 11, 85, 96, 98, 99, 117-118, 121, 129, 145

women's studies 4, 10-12, 20, 37

World Bank 8, 9, 21-24, 35, 43, 58, 108, 143, 145, 149, 150

WRDP 9, 37, 113, 153-154

Yoruba 100, 107

Zaire 111

Zambia 23, 44, 58, 89-93

ZARD 58, 118

Zimbabwe 9, 18, 32, 37, 63, 124

RESARC Understanding technology
396:001.92(6) S 8
c.1 31020



152701